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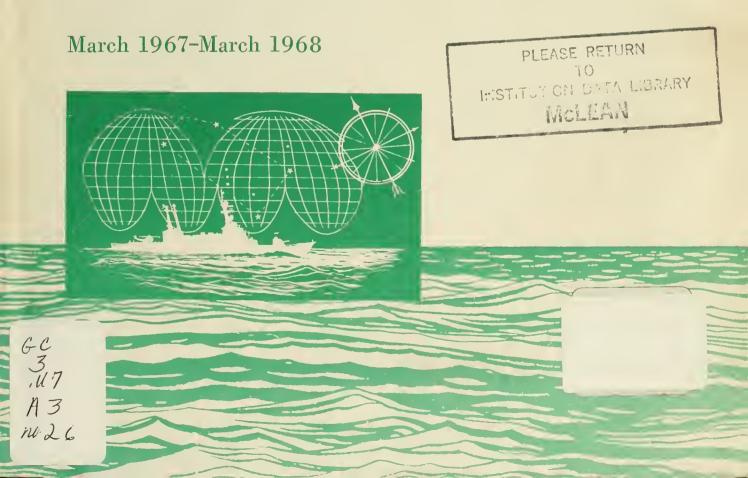
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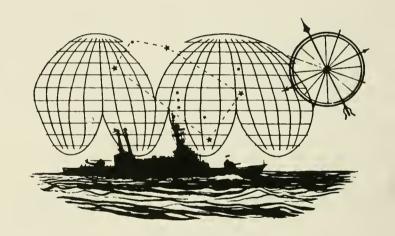
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OCEANOGRAPHIC OBSERVATIONS
NORTH PACIFIC OCEAN STATION NOVEMBER



UNITED STATES COAST GUARD OCEANOGRAPHIC



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REPORT No. 26 cg 373-26

OCEANOGRAPHIC OBSERVATIONS NORTH PACIFIC OCEAN STATION NOVEMBER 30°00′ N., 140°00′ W.

March 1967-March 1968



David M. Husby



Frontispiece: An extremely large manganese nodule inadvertently retrieved by the USGC PONTCHARTRAIN (WHEC-70) during a deep Nansen cast on Ocean Station NOVEMBER in 3749 meters of water in September 1967. This specimen, weighing approximately 240 Kg., was entangled in the oceanographic cable which was accidentally laid on the bottom. Scientists from the Scripps Institution of Oceanography subsequently identified the rock as probably the largest manganese nodule ever found.

ABSTRACT

This report contains the observed and interpolated temperature and salinity data plus the computed sigma-t, geopotential anomalies and sound velocities for 195 oceanographic stations occupied by U. S. Coast Guard Cutters at Ocean Station NOVEM-BER (centered at 30° N, 140° W) between 20 March 1967 and 31 March 1968. The particular cruises were the CGC KLAMATH, 20 March-8 April 1967; CGC PONTCHARTRAIN, 2-19 May 1967; CGC WINONA, 15 June-1 July 1967; CGC PONTCHAR-TRAIN, 23 July-13 August 1967; CGC PONTCHARTRAIN, 3-24 September 1967; CGC TANEY, 15 October-5 November 1967; CGC KLAMATH, 26 November-17 December 1967; CGC TAN-EY, 7-28 January 1968; CGC WACHUSETT, 28 January-18 February 1968; CGC TANEY, 18 February-10 March 1968; and the CGC PONTCHARTRAIN, 10-31 March 1968. Daily casts of 13-14 Nansen bottles were made to a depth of 1500 meters when weather conditions permitted. In addition, sampling was successfully extended to near the bottom on at least one station during each patrol.



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Oceanographic Observations North Pacific Ocean Station NOVEMBER 30° 00′ N., 140° 00′ W., March 1967 - March 1968

By David M. Husby

INTRODUCTION

The U.S Coast Guard has been conducting a long-term series of oceanographic observations at Ocean Station NOVEMBER (30°00' N., 140°00′ W.) since July 1966 (Husby, 1968). Investigations of oceanographic conditions in this vicinity had been made prior to this time by other organizations (Cochrane, 1950 and Thomas and Amstutz, 1966). The location of NOVEMBER in relation to the other Ocean Stations in the world is shown in figure 1. The sampling program originally consisted of daily Nansen bottle casts to 1500 meters on alternate 21-day patrols. Since 7 January 1968 the program has been expanded to daily Nansen bottle casts on every patrol. Serial observations of temperature and salinity are made at all stations.

This report contains the oceanographic station data from 195 stations at NOVEMBER between March 1967 and March 1968. The cruises were the CGC KLAMATH, 20 March-8 April 1967; CGC PONTCHARTRAIN, 2-19 May 1967; CGC WINONA, 15 June-1 July 1967; CGC PONTCHARTRAIN, 23 July-13 August 1967; CGC PONTCHARTRAIN, 3-24 September 1967; CGC TANEY, 15 October-5 November 1967; CGC KLAMATH, 26 November-17 December 1967; CGC TANEY, 7-28 January 1968; CGC WACHUSETT, 28 January-18 February 1968; CGC TANEY, 18 February-10 March 1968; and the CGC PONTCHARTRAIN, 10-31 March 1968.

PROCEDURES

The Ocean Station Vessels are normally required to maintain their position within a ten-

mile square grid centered on Ocean Station NOVEMBER (30°00′ N., 140°00′ W.) while engaged in oceanographic operations. Occasionally, the vessels are requested to move their position due south to about 29°00′ N., for periods of from one to five days, for other operational commitments. The bathymetry in the vicinity of NOVEMBER is shown in figure 2.

For the daily casts the desired sampling depths are surface, 10, 30, 50, 75, 100, 150, 200, 300, 400, 600, 800, 1000, and 1500 meters. For deep casts, an additional cast was made with desired sampling depths of 2000, 2500, 3000, 3500, 4000, 4500, and 4600 meters (near bottom). A pair of protected, deepsea reversing thermometers was placed in each Nansen bottle and, in addition, on five bottles from 200 to 1500 meters, an unprotected thermometer was paired with the two protected ones for the thermometric determination of the sampling depths. Depths which were determined thermometrically are preceded by a "T" in the station data. Field observations of temperature were transmitted via radio teletype to the Coast Guard Oceanographic Unit, Washington D.C. for real-time data processing and quality control. Procedures used in the recording and processing of the temperature data essentially follow those outlined in U.S. Naval Oceanographic Office Pub. No. 607 (Third ed., 1968) and LaFond (1951). The Coast Guard Oceanographic Unit uses a Digital Equipment Corporation PDP-5 computer to process the temperature data.

Salinity samples were drawn from each Nansen bottle and the salinity content of each sample determined aboard ship using inductive salinometers. Duplicate water samples were drawn from the surface and 1500 meter Nansen bottle at each station and delivered to the Coast Guard Oceanographic Unit for quality control when the vessels returned to port. These samples were run by a different operator and on a different instrument and it was found that, on the average, 89 percent of the samples differed from the ship's values by less than $0.010^{\circ}/_{00}$. The samples were higher in salinity than the ship's values by an average of only $.004^{\circ}/_{00}$ after about a month's period.

Processed temperature and salinity data were recorded on form NODC-EXP-3167/25 (3-64), Physical and Chemical Data form for oceanographic stations and delivered to the National Oceanographic Data Center (NODC) for archiving and the preparation of listings. The interpolated temperature and salinities for standard depths, sigma-t values, geopotential anomalies (\triangle D) and sound velocities were computed by NODC and listings provided for the preparation of Tables I-XI.

CRUISE NARRATIVES

The CGC KLAMATH occupied 17 oceanographic stations during her 20 March—8 April 1967 patrol. The majority of the casts had maximum useful depths between 1350 and 1950 meters. Two casts had maximum sampling depths of 1113 and 1123 meters due to extremely large wire angles. One deep cast was accomplished, with a maximum sampling depth of 3778 meters in a water depth of 4389 meters. One shallow station has no salinity values due to an error by the operator of the salinometer. Four stations were occupied 90 miles south of O.S. NOVEMBER grid. The distribution of the other 13 stations about the center of NOVEMBER is shown in figure 3. The data are listed by NODC as Ref. No. 31-1079 and as Table I in this report.

The CGC KLAMATH also occupied a line of 18 oceanographic stations from Ocean Station NOVEMBER to the coast of Oregon on the return trip to port. These stations make up a portion of Standard Monitoring Section 4 and the data will be published at a later date. The data are also listed by NODC as Ref. No. 31–1079.

During the period 2-19 May 1967, the CGC

PONTCHARTRAIN occupied 17 oceanographic stations on Ocean Station NOVEMBER. The majority of these stations had maximum useful sampling depths between 1400 and 1700 meters. One cast reached only to 991 meters due to a very large wire angle. One deep cast was accomplished with a maximum sampling depth of 3669 meters in a water depth of 4114 meters. Four stations were taken 90 miles south of NOVEMBER and the distribution of the other 13 stations about the center of NOVEMBER is shown in figure 4. The data are listed by NODC as Ref. No. 31–1080 and as Table II of this report.

The CGC PONTCHARTRAIN also occupied 11 stations on Standard Monitoring Section 6 on the return voyage from O.S. NOVEMBER. The data are also listed by NODC under Ref. No. 31–1080 but will be published at a later date.

The CGC WINONA successfully occupied 17 oceanographic stations during the 15 June–1 July 1967 patrol on Ocean Station NOVEMBER. All seventeen stations had maximum useful depths between 1350 and 1650 meters. No deep cast was accomplished as the ship had difficulties with the winch brake. One station was taken 90 miles south of Ocean Station NOVEMBER and the distribution of the other 16 about the center of NOVEMBER is shown in figure 5. The data are listed by NODC as Ref. No. 31–1083 and as Table III in this report.

The entire 24 stations of Standard Monitoring Section 4 were occupied by the CGC WI-NONA on the return trip from NOVEMBER. These data are also listed by NODC as Ref. No. 31–1083, but will be published at a later date.

The CGC PONTCHARTRAIN successfully occupied 21 oceanographic stations during the 23 July–13 August patrol at Ocean Station NOVEMBER. All casts except one had maximum useful depths of between 1400 and 1530 meters. The one exception was to only 1296 meters due possibly to a large subsurface current. This station was taken 90 miles south of Ocean Station NOVEMBER, as were two other stations. The distribution of the other stations about the center of NOVEMBER is shown in figure 6. One deep cast was accomplished, with a maximum sampling depth of 4400 meters in

a water depth of 4663 meters. The data are listed by NODC as Ref. No. 31-1142 and as Table IV of this report.

The CGC PONTCHARTRAIN also participated in cooperative deep current observations conducted by personnel from the Scripps Institution of Oceanography. Two free-vehicle type current meters were used for six separate drops with five recoveries. The current meter array consisted of a fiberglass-aluminum pole with float connected by a nylon line to a secondary float to which was connected the current meter instrument and ballast weight. Each pole-float contained a radio beacon, battery and antenna, a radar reflector, and a bright orange flag. Little or no success was experienced with the radio beacons and radar reflectors. The most valuable recovery aid turned out to be the bright orange flag, which was sighted up to 31/2 miles distant. The current observations are retained by the Scripps Institution of Oceanography, La Jolla, California.

The CGC PONTCHARTRAIN again was assigned to Ocean Station NOVEMBER patrol for the period of 30 August-29 September 1967. During this period 20 oceanographic stations were occupied. All twenty stations had maximum useful depths between 1400 and 1630 meters. One deep cast was accomplished, with a maximum sampling depth of 3265 meters in a water depth of 3749 meters. One station was occupied 60 miles south of Ocean Station NOVEMBER and one 90 miles south; the distribution of the other stations about the center of NOVEMBER is shown in figure 7. The data are listed by NODC as Ref. No. 31–1163 and as Table V of this report.

In cooperation with the Scripps Institution of Oceanography, six free-vehicle current meters were launched during this patrol and five recovered. Approximately 630 hours of bottom current observations were obtained. These data are retained by the Scripps Institution of Oceanography, La Jolla, California.

The CGC PONTCHARTRAIN also occupied the entire 24 stations of Standard Monitoring Section 6 on the return trip to port. These data are also listed by NODC as Ref. No. 31–1163, but will be published at a later date.

There was an interesting occurrence on the

ship's first attempt at a deep cast on Ocean Station NOVEMBER. A miscalculation was made in the depth of water to the bottom and 500 meters of cable were laid on the bottom. When the cast was retrieved, a large boulder, weighing approximately 240kg. and with dimensions of about 36 inches in height and about 24 inches in breadth, was entangled in the cable and was brought to the surface. The specimen was subsequently given to the Scripps Institution of Oceanography for analysis and was identified as an extremely large manganese nodule. (see frontispiece).

During the 15 October-8 November patrol of the CGC TANEY on Ocean Station NOVEMBER, a total of 21 oceanographic stations were occupied. With the exception of one cast, all casts had maximum useful depths between 1450 and 1650 meters. One station had a maximum sampling depth of only 552 meters due to the failure of a Nansen bottle to release its messenger. One deep cast was accomplished, with a maximum sampling depth of 4270 meters in a water depth of 4390 meters. This distribution of the stations about the center of NOVEMBER is shown in figure 8. The data are listed by NODC as Ref. No. 31-1178 and as Table VI of this report.

The CGC TANEY also occupied 19 oceanographic stations on Standard Monitoring Section 5 on the return trip NOVEMBER. These data are also listed by NODC as Ref. No. 31–1178, but will be published at a later date.

The CGC KLAMATH occupied 13 oceanographic stations during the 26 November–17 December 1967 patrol on Ocean Station NO-VEMBER. All stations had maximum useful depths between 1350 and 1950 meters. One deep cast was accomplished, with a maximum sampling depth of 3891 meters in a water depth of 4244 meters. The distribution of the stations about the center of NOVEMBER is shown in figure 9. Two stations were occupied approximately 60 miles south of Ocean Station NOVEMBER. The data are listed by NODC as Ref. No. 31–1185 and as Table VII of this report.

The CGC TANEY occupied 21 oceanographic stations during the 7-28 January 1968 patrol at Ocean Station NOVEMBER. With

the exception of four casts, all casts had maximum useful depths between 1250 and 1600 meters. The four shallow casts had maximum useful depths of 372, 693, 966, and 997 meters, due mainly to bottles failing to release messengers. Adverse weather caused difficult operating conditions and a difficulty in maintaining station, as can be seen in figure 10 which shows the distribution of stations about the center of NO-VEMBER. Four stations were taken about 90 miles south of Ocean Station NOVEMBER. One deep cast was accomplished with a maximum sampling depth of 3964 meters in a water depth of 4114 meters. All these data are listed by NODC as Ref. No. 31-1200 and as Table VIII of this report.

During the 28 January–18 February 1968 patrol at Ocean Station NOVEMBER, the CGC WACHUSETT occupied 10 oceanographic stations. All casts had maximum useful depths between 1300 and 1520 meters. A deep cast was not accomplished due to a limited amount of cable available aboard ship. The distribution of the stations about the center of NOVEMBER is shown in figure 11. Daily casts were not accomplished during the entire three week period due to adverse weather conditions. The data are listed by NODC as Ref. No. 31–1205 and as Table IX of this report.

A total of 19 oceanographic stations were occupied by the CGC TANEY during the 18 February-10 March 1968 patrol at Ocean Station NOVEMBER. With the exception of two casts all stations had maximum useful depths between 1350 and 1950 meters. These two exceptions had maximum useful depths of only 449 and 861 meters due to the failure of a bottle to trip and the pretripping of a bottle, respectively; both these malfunctions being probably caused by very large wire angles. No deep cast was accomplished during this patrol. One station was taken outside the Ocean Station grid, about 90 miles directly south of station and the distribution of the other stations about the center of NOVEMBER is shown in figure 12. The data are listed by NODC as Ref. No. 31-1209 and as Table X of this report.

On 19 February 1968 the CGC TANEY performed the mooring of the Scripps Institution of Oceanography oceanographic raft. The raft was moored at 30°01.3 N., 139°56.6 W., in

4300 meters of water. The raft's position was checked throughout the remainder of the patrol by celestial observations and it was found that the raft was not drifting and that there was a 0.3 knot current setting eastward.

During the 10–31 March 1968 patrol by the CGC PONTCHARTRAIN, a total of 19 oceanographic stations were occupied. All stations had maximum useful depths between 1350 and 1800 meters. One deep cast was accomplished with a maximum sampling depth of 4213 meters in a water depth of 4480 meters. Three stations were occupied about 60 miles south of Ocean Station NOVEMBER and the distribution of the other stations about the center of NOVEMBER is shown in figure 13. The data are listed by NODC as Ref. No. 31–1249 and as Table XI of this report.

The CGC PONTCHARTRAIN also occupied 22 of the 24 stations on Standard Monitoring Section 6 between Ocean Station NOVEMBER and Long Beach, California. These data are also listed by NODC as Ref. No. 31–1249, but will be published at a later date.

COOPERATIVE PROJECTS

Occasionally other observations are made on station at the request of and in cooperation with other government agencies or private institutions. In the past, these programs have included the following:

(1) Deep Free Vehicle Observations— (Scripps Institution of Oceanography, La Jolla, California)

Deep Current observations have been made at Ocean Station NOVEMBER using a free vehicle equipped with a recording current meter. The vehicle is deployed from 2–5 days, returns to the surface automatically and is retrieved. It has employed an underwater camera. This research is sponsored by the National Science Foundation and is being conducted by Dr. Richard Schwartzlose. All data are retained at the Scripps Institution of Oceanography.

(2) Survey of Fallout Cesium in the Pacific Ocean—(Scripps Institution of Oceanography)

Since 1966 several Ocean Station Vessels on Ocean Station NOVEMBER have collected water samples and tested sampling equipment for the determination of the distribution of trace radioactive Cesium in the Pacific. The sampling program usually consists of four hydrocasts to 850 meters on station with a four hour soak time. Also, a sampling "fish" is towed two hours per day while enroute port at normal cruising speed. This research is sponsored by the Atomic Energy Commission and is being conducted under the direction of Dr. T. R. Folsom.

(3) Environmental Sampling—(U.S. Naval Radiological Defense Laboratory, San Francisco, California)

Since September 1965 various Ocean Station Vessels have collected rainwater samples and a surface sea water sample for analysis of fallout distribution.

(4) Carbon Dioxide Equalization Observations—(University of Washington)

This program was initiated in spring of 1967 and consists of Ocean Station Vessels collecting volumes of water for an analysis equilibrating CO₂ in the atmosphere with CO₂ in the surface waters of the North Pacific. This research is being sponsored by the National Science Foundation and the Office of Naval Research and is being conducted by scientists at the University of Washington.

DISCUSSION

To illustrate the temporal or gross seasonal changes in water properties at different levels at Ocean Station NOVEMBER plots of water temperature versus time (figures 14, 15, and 16) and salinity versus time (figures 17, 18, and 19) were constructed. The diurnal changes in the surface layers have been effectively eliminated, as the majority of the 195 stations were occupied at the same time each day (2000 hours Greenwich Mean Time or 1100 hours Zone Time). The effects of spatial variability are revealed in the plots of the data from the 32 stations which were occupied from 60-90 miles south of Ocean Station NOVEMBER. These data are indicated in figures 14-19 by the large black dots on the data points. These data reveal that a water mass of significantly warmer temperature and higher salinity was present, at least in the upper 400 meters, just 60 miles to the south.

Figures 14-19 consist of plots of temperature and salinity versus time at the surface and 100, 200, 300, 400, 600, 800, 1000, and 1500

meter levels. The salient feature of the temperature versus time plots is the marked seasonal cycle with a heating period from March to September 1967 and then a cooling period from September 1967 to March 1968. The maximum surface temperatures were observed in September in the range of 24-25°C. The surface temperature dropped to a minimum of less than 18°C in March 1968. During the month of November 1967, the surface temperature appears to have dropped nearly 4.0°C and was the most pronounced change which occurred during the observational period. During the period from December 1967 to January 1968, a convective process raised the 100 meter temperature from 17°C to almost 19°C. The convective mixing appears to have been effective to the 400 meter level raising the temperature from about 7.90°C in December to about 8.40°C in January. From January 1968 to March 1968 there was a gradual decrease of temperature at all levels from the surface to 400 meters. At the 600 meter level and below there was little change in the temperature structure between March 1967 and March 1968.

The salinity versus time plots (figures 17, 18, and 19) reveal a somewhat similar seasonal cycle in the upper 200 meters, however there were anomalous conditions observed during the summer of 1967. Ignoring those stations which were occupied 60-90 miles to the south of Ocean Station NOVEMBER, (those points with large black dots), the surface salinity appears to be increasing from March 1967 to June 1967, however there were a series of four stations occupied between 9-14 May at which the salinity showed a very significant decrease (nearly $0.40^{-0}/_{00}$). These low salinities were associated with relatively low temperatures (17.40° C.) and it appears that there was an influx of a Subarctic type water into the vicinity during this period. The surface salinity reached a maximum of nearly 35.30 0/00 during early June 1967, followed by a sudden, inexplicable decrease in late June. A minimum was observed in the surface salinity in July of about 34.75 % followed by anomalous increases in early August to values approaching 35.40 % ... After August there appeared to be a trend

toward a seasonal cycle associated with the maximum heating of the surface layers. From September to November 1967 the surface salinity showed a gradual increase from about 35.10 to about $35.25~\rm ^{0}/_{00}$. This second maximum was observed in October. From November 1967 to March 1968 there was a gradual decrease in surface salinity to a low of about $34.70~\rm ^{0}/_{00}$.

The salinity at the 100 and 200 meter levels showed a considerable increase from December 1967 to January 1968 due to the convective mixing mentioned above. Since the high temperature at the surface creates a stable structure, it appears that the increase in salinity at the surface promotes the convective process at Ocean Station NOVEMBER. However, from January to March 1968, there was a decrease of salinity in the upper 200 meters. The salinity below 400 meters showed little variability during the observational period.

VERTICAL PROPERTY DISTRIBUTION

Envelopes of temperature and salinity versus depth have been constructed for each cruise to Ocean Station NOVEMBER to show the vertical structure in the water column and to delineate the gross seasonal changes in properties (figure 20–41). These envelopes reveal the basic thermohaline stratification of properties at Ocean Station NOVEMBER: (1) a surface mixed layer, varying from 10 to 150 meters in depth (2) the main thermocline from 200 to 600 meters in depth, and (3) the North Pacific deep water below 600 meters.

Ocean Station NOVEMBER is located in the Subtropical Region of the Pacific Ocean which is characterized by an excess of evaporation over precipitation. The salinity of the water is greatest at the surface and decreases to a minimum between 200 and 800 meters in depth (Tully, 1964). There is no permanent halocline in this region and therefore the stability of the density structure is solely dependent on the temperature structure. The envelopes of temperature versus depth (figures 20-30) illustrate the response of the surface waters to the seasonal cycles of heating and cooling. From March 1967 to May 1967 the effects of winter cooling were evidenced. The surface homogeneous layer (18.0-18.5° C. water) reached a depth of about 100 meters in March and by

May had increased in depth to nearly 150 meters and the temperature was in the range of 17.9-18.9° C. with the exception of four anomalous stations where the temperatures dropped to about 17.4° C. During the period from June 1967 to September 1967, the summer heating established a seasonal thermocline in the upper 100 meters. In September when the maximum surface temperatures of 24.5° C, were reached. there was a negative gradient of almost 7.0° C. in the upper 100 meters. In October 1967, with the advent of a cooling season, the surface temperatures decreased nearly 1.0°C and a shallow mixed layer was formed of about 30 meters in depth. By December 1967 the surface temperature had decreased to the range of 20.0-21.5° C. and the homogeneous layer had increased in depth to about 50 meters. In January 1968 the mixed layer had reached a depth of about 100 meters with temperatures in the range of 19.0-20.5° C. From January to March 1968 the temperature and extent of the mixed layer changed very little, while the dominant process appeared to be an increase of the temperature in the depths between 100 and 400 meters. Little variability was observed in the temperature of the water at the levels below 400 meters. From 600 meters to 1500 meters the temperature showed a gradual decrease from about 5.00° to 2.65°C.

The dominant feature of the salinity versus depth envelopes (figures 31-41) is the salinity minimum located between 200 and 600 meters in depth. The sampling program of sampling at discrete levels obviously does not delineate the continuous vertical structure, but several major features are evident from the salinity envelopes. There is a salinity minimum of about $34.05-34.10^{-0}$ located at 200 meters. This feature is present during most of the year except during the late winter, January—February, when the convective mixing increases the salinity at this level to the range of 34.20-34.40 0 /₀₀. Associated with the salinity minimum at 200 meters there is an intermediate maximum at 300 meters of about $34.10 - 34.15 \, ^{\circ}/_{\circ \circ}$

A permanent feature of the vertical salinity structure at Ocean Station NOVEMBER is the minimum value between 400 and 600 meters. This salinity minimum ranges between 33.95 and $34.05\,^{0}/_{00}$ and identifies the upper limit of the North Pacific Intermediate Water at NO-VEMBER. Below 600 meters the salinity increases with depth to a value of about $34.56\,^{0}/_{00}$ at 1500 meters.

SUMMARY

Ocean Station NOVEMBER is located in the Subtropical Region at the eastern North Pacific Ocean which is known to be under the influence of a clockwise gyral motion. In the vicinity of NOVEMBER the flow is so slow, however, that the near surface waters have time to become adjusted to the local atmospheric climate (Tully, 1964). At the latitude of NO-VEMBER the seasonal range of temperature is relatively small, 18 to 24°C, and the temperature of the surface waters is maintained at a high level. The dominant climatic influence in the vicinity of NOVEMBER is the excess of evaporation over precipitation. The excess evaporation increases the salinity of the surface waters and therefore increases the density, which, in turn, would promote convective mixing.

The results of the oceanographic observations at Ocean Station NOVEMBER between March 1967 and March 1968 revealed a stable temperature structure during the entire period with a maximum surface temperature of 24.5°C in September and a minimum of about 17.8°C in March 1968. A convective mixing process was evidenced in January and February 1968 by the rise in temperature at the 100, 200, 300, and 400 meters levels. Due to the stable temperature structure at NOVEMBER, this increase in temperature at the 100–400 meter levels could be explained only by a convective mixing process or by advection. Due to the increase of salinity at these levels during this period the convective mixing process, caused by an increase in surface salinity, is the most likely explanation.

Two minima were observed in the vertical salinity distribution during the spring and summer months, one at about 200 meters and the other at about 500 meters. This situation was explained by Sverdrup (1942) as the result of the oceanic circulation. The upper minimum was identified as the result of the North Pacific Central Water spreading over the Subarctic Water and the lower minimum as the direct continuation of the Intermediate Water flowing in the eastern gyral of the North Pacific Ocean. The upper minimum is destroyed during the winter months by the convective mixing which increases the salinity.

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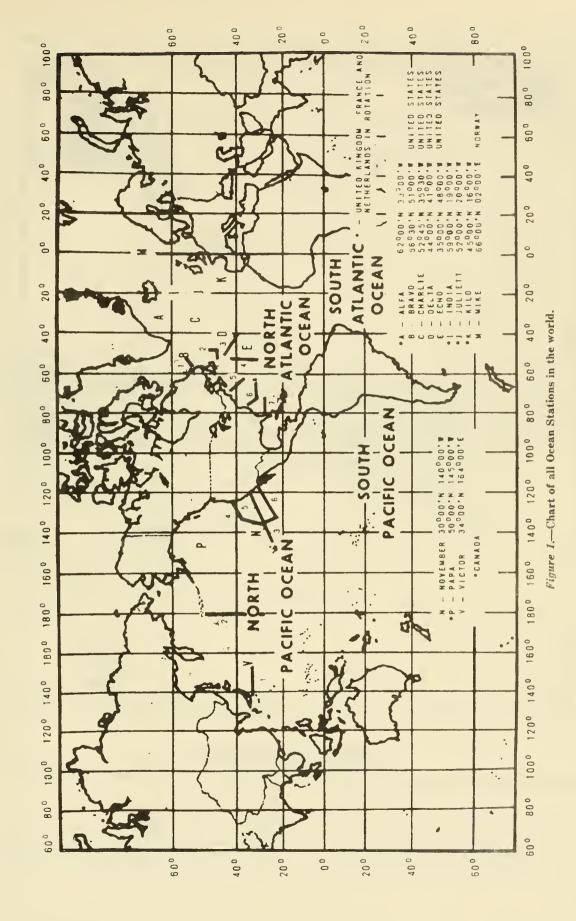
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CG-373-2	Morse, R. M. and J. W. McGary (1964) Oceanographic Observations at North Atlantic Ocean Station ECHO 35° N, 48° W, January-February 1963.
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- CG-373-20 Shuhy, J. L. Oceanographic Observations at North Atlantic Ocean Station BRAVO, October 1966-October 1967. (In Prep.)
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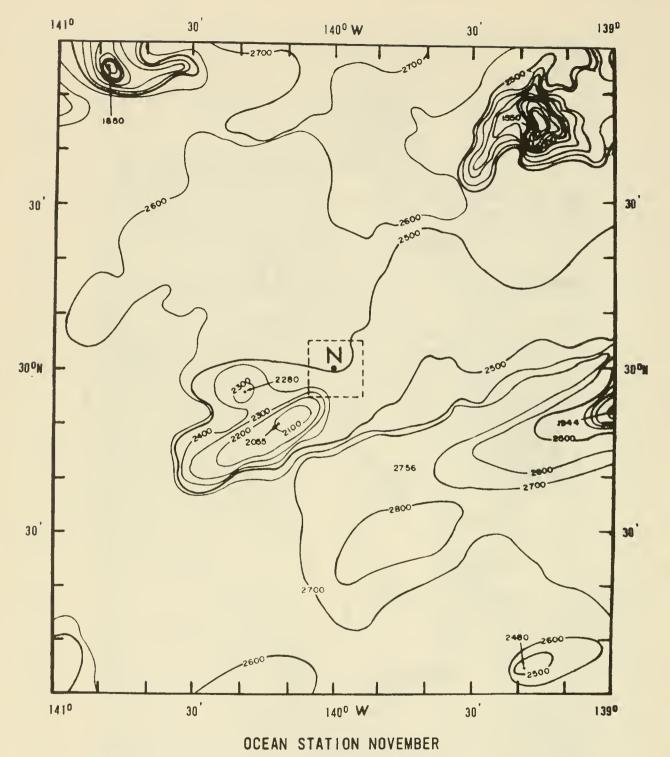


Figure 2.—Bathymetry in the vicinity of Ocean Station NOVEMBER (Contour interval is 100 fathoms).

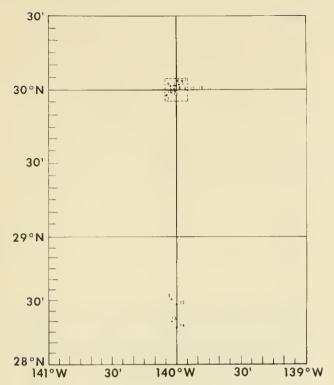


Figure 3.—Positions of oceanographic stations taken by USCGC KLAMATH during 20 March-8 April 1967 at Ocean Station NOVEMBER.

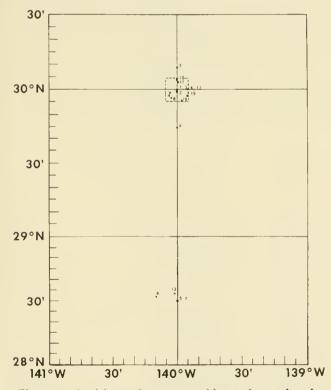


Figure 4.—Positions of oceanographic stations taken by USCGC PONTCHARTRAIN during 2–19 May 1967 at Ocean Station NOVEMBER.

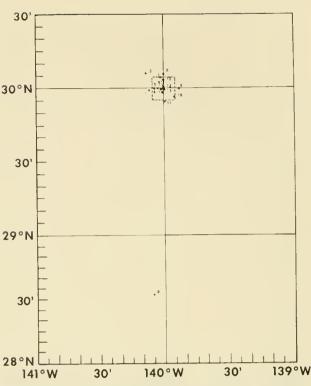


Figure 5.—Positions of oceanographic stations taken by USCGC WINONA during 15 June-1 July 1967 at Ocean Station NOVEMBER.

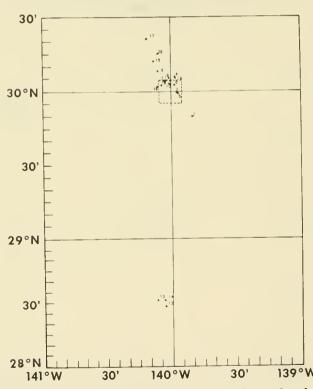


Figure 6.—Positions of oceanographic stations taken by USCGC PONTCHARTRAIN during 23 July-13 August 1967 at Ocean Station NOVEMBER.

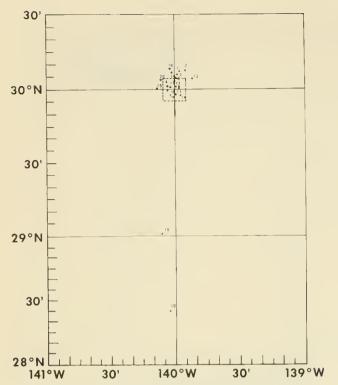


Figure 7.—Positions of oceanographic stations taken by USCGC PONTCHARTRAIN during 3-24 September 1967 at Ocean Station NOVEMBER.

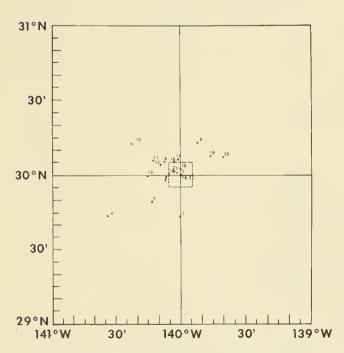


Figure 8.—Positions of oceanographic stations taken by USCGC TANEY during 15 October-5 November 1967 at Ocean Station NOVEMBER.

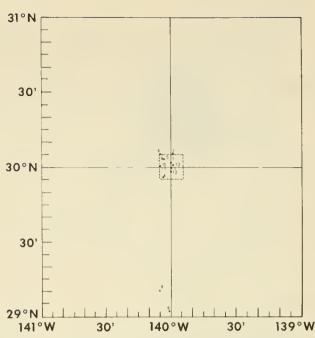


Figure 9.—Positions of oceanographic stations taken by USCGC KLAMATH during 26 November-17 December 1967 at Ocean Station NOVEMBER.

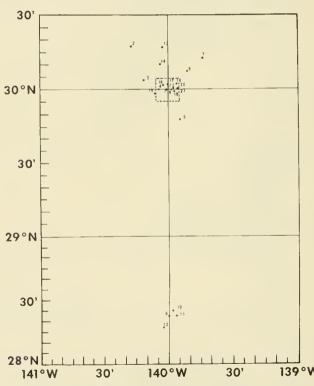


Figure 10.—Positions of oceanographic stations taken by USCGC TANEY during 7-28 January 1968 at Ocean Station NOVEMBER.

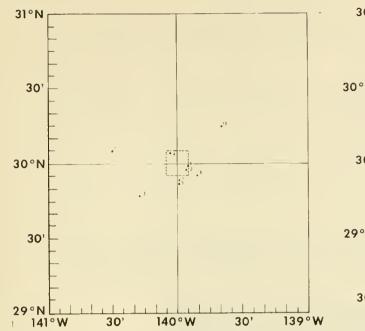


Figure 11.—Positions of oceanographic stations taken by USCGC WACHUSETT during 28 January-18 February 1968 at Ocean Station NOVEMBER.

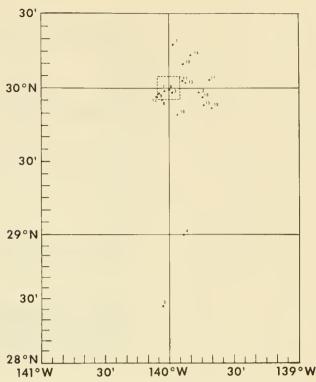


Figure 12.—Positions of oceanographic stations taken by USCGC TANEY during 18 February-10 March 1968 at Ocean Station NOVEMBER.

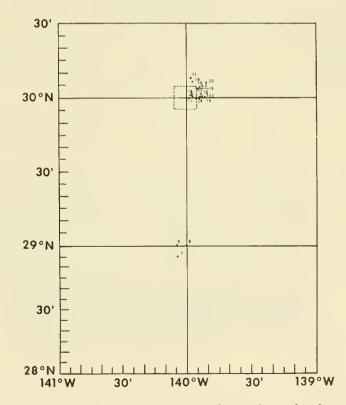
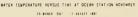


Figure 13.—Positions of oceanographic stations taken by USCGC PONTCHARTRAIN during 10-31 March 1968 at Ocean Station NOVEMBER.



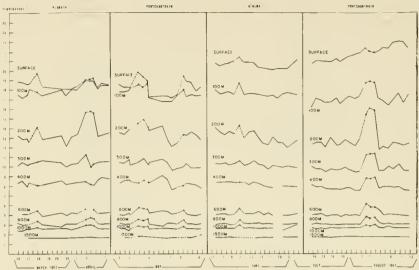


Figure 14.—Water temperature versus time at selected depths at Ocean Station NOVEMBER, 20 March-13 August 1967, (Dashed lines indicate data not taken on consecutive days and solid dots indicate data obtained outside normal O.S. grid, see Figures 3-6).

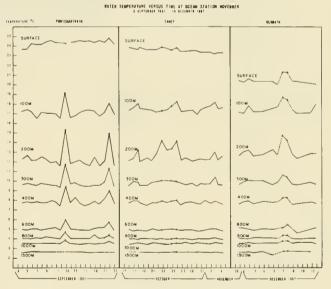


Figure 15.—Water temperature versus time at selected depths at Ocean Station NOVEMBER 3 September-16 December 1967, (Dashed lines indicate data not taken on consecutive days and solid dots indicate data obtained outside normal O.S. grid, see Figures 7-9.)

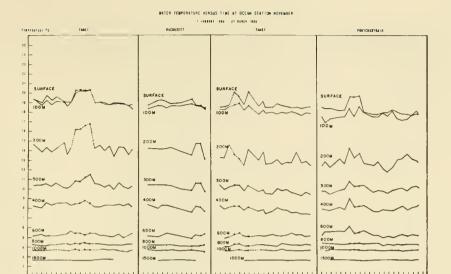


Figure 16.—Water temperature versus time at selected depths at Ocean Station NOVEMBER, 7 January-31 March 1968. (Dashed lines indicate data not taken on consecutive days and solid dots indicate data obtained outside normal O.S. grid, see Figures 10-13.)

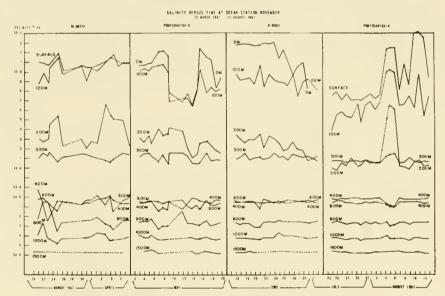


Figure 17.—Salinity versus time at selected depths at Ocean Station NOVEMBER, 20 March-13 August 1967. (Dashed lines indicate data not taken on consecutive days and solid dots indicate data obtained outside normal O.S. grid, see Figures 3-6.)

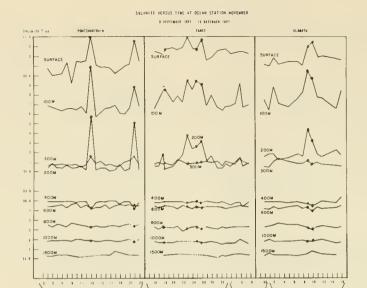


Figure 18.—Salinity versus time at selected depths at Ocean Station NOVEMBER, 3 September-16 December 1967, (Dashed lines indicate data not taken on consecutive days and solid dots indicate data obtained outside normal O.S. grid, see Figures 7-9.)

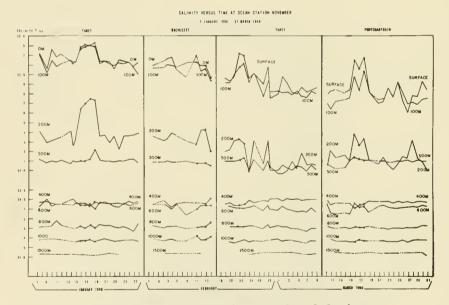


Figure 19.—Salinity versus time at selected depths at Ocean Station NOVEMBER, 7 January-31 March 1968, (Dashed lines indicate data not taken on consecutive days and solid dots indicate data obtained outside normal O.S. grid, see Figures 10-13.)

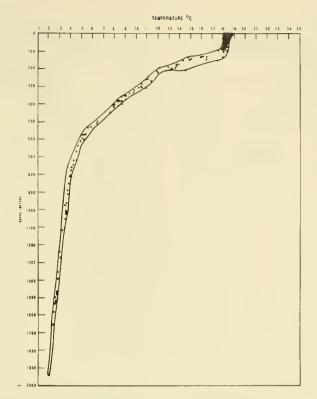


Figure 20.—Envelope of temperature versus depth at oceanographic stations taken by USCGC KLAMATH at Ocean Station NOVEMBER, 20 March-8 April 1967.

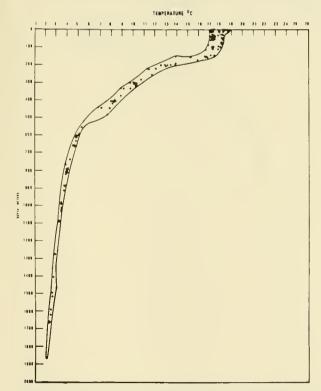


Figure 21.—Envelope of temperature versus depth at oceanographic stations taken by USCGC PONTCHARTRAIN at Ocean Station NOVEMBER, 2-19 May 1967.

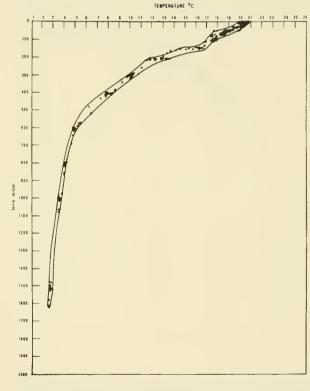


Figure 22.—Envelope of temperature versus depth at oceanographic stations taken by USCGC WINONA at Ocean Station NOVEMBER, 15 June-1 July 1967.

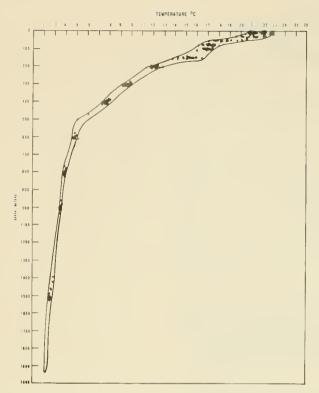


Figure 23.—Envelope of temperature versus depth at oceanographic stations taken by USCGC PONTCHARTRAIN at Ocean Station NOVEMBER, 23 July-13 August 1967.

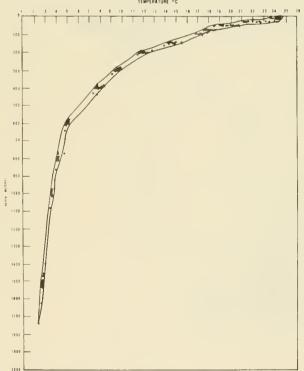


Figure 21.—Envelope of temperature versus depth at oceanographic stations taken by USCGC PONTCHARTRAIN at Ocean Station NOVEMBER, 3-24 September 1967.

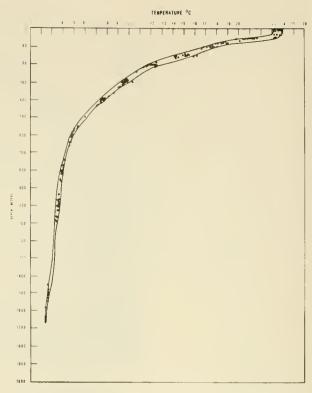


Figure 25.—Envelope of temperature versus depth at oceanographic stations taken by USCGC TANEY at Ocean Station NOVEMBER, 15 October-5 November 1967.

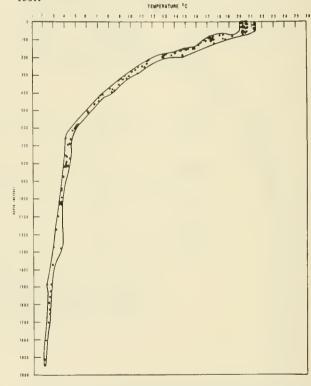


Figure 26.—Envelope of temperature versus depth at oceanographic stations taken by USCGC KLAMATH at Ocean Station NOVEMBER, 26 November-17 December 1967.

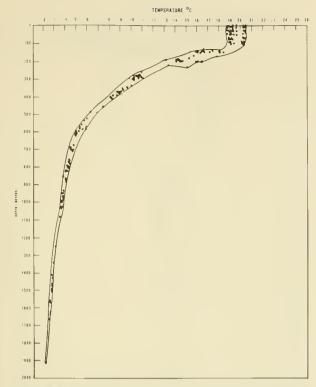


Figure 27.—Envelope of temperature versus depth at oceanographic stations taken by USCGC TANEY at Ocean Station NOVEMBER, 7-28 January 1968.

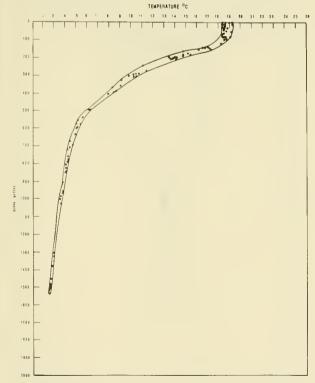


Figure 28.—Envelope of temperature versus depth at oceanographic stations taken by USCGC WACHU-SETT at Ocean Station NOVEMBER, 28 January-18 February 1968.

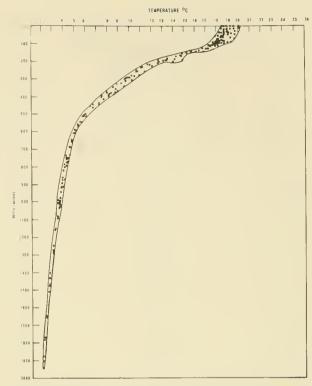


Figure 29.—Envelope of temperature versus depth at oceanographic stations taken by USCGC TANEY at Ocean Station NOVEMBER, 18 February-10 March 1968.

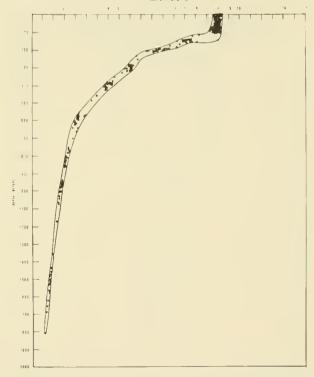


Figure 30.—Envelope of temperature versus depth at oceanographic stations taken by USCGC PONTCHARTRAIN at Ocean Station NOVEMBER, 10-31 March 1968.

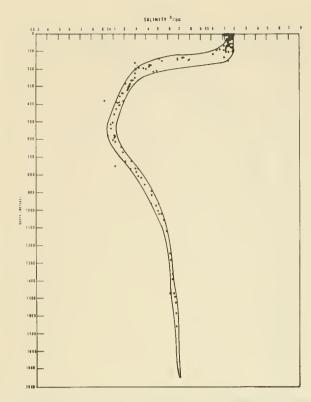


Figure 31.—Envelope of salinity versus depth at oceanographic stations taken by USCGC KLAMATH at Ocean Station NOVEMBER, 20 March-8 April 1967.

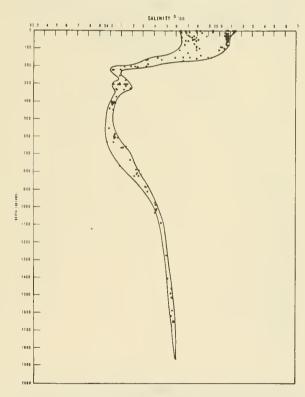


Figure 32.—Envelope of salinity versus depth at oceanographic stations taken by USCGC PONTCHAR-TRAIN at Ocean Station NOVEMBER, 2-19 May 1967.

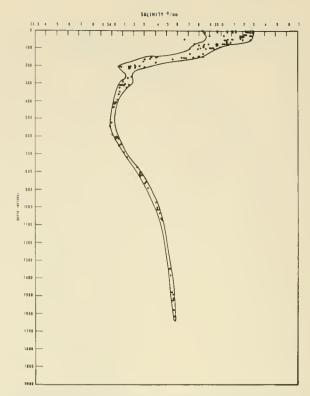


Figure 33.—Envelope of salinity versus depth at oceanographic stations taken by USCGC WINONA at Ocean Station NOVEMBER, 15 June-1 July 1967.

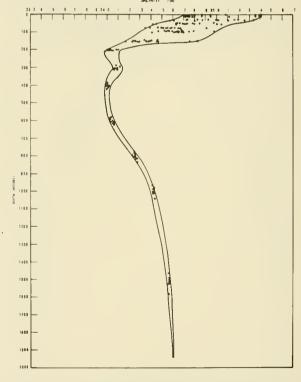


Figure 31.—Envelope of salinity versus depth at oceanographic stations taken by USCGC PONTCHAR-TRAIN at Ocean Station NOVEMBER, 23 July-13 August 1967.

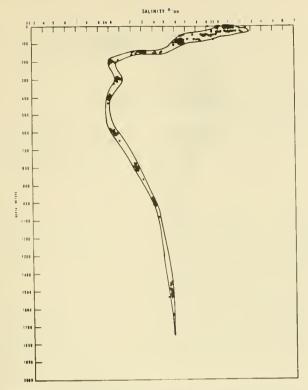


Figure 35.—Envelope of salinity versus depth at oceanographic stations taken by USCGC PONTCHAR-TRAIN at Ocean Station NOVEMBER, 3-24 September 1967.

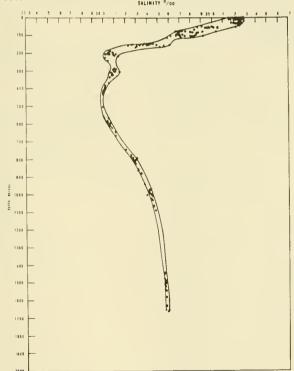


Figure 36.—Envelope of salinity versus depth at oceanographic stations taken by USCGC KLAMATH at Ocean Station NOVEMBER, 26 November-17 December 1967.

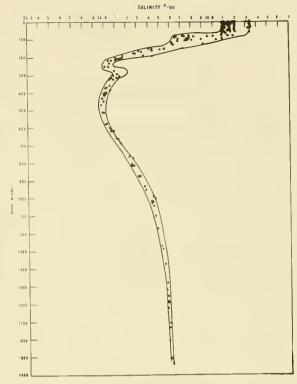


Figure 37.—Envelope of salinity versus depth at oceanographic stations taken by USCGC KLAMATH at Ocean Station NOVEMBER, 26 November-17 December 1967.

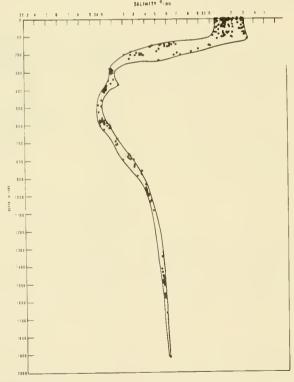


Figure 38.—Envelope of salinity versus depth at oceanographic stations taken by USCGC TANEY at Ocean Station NOVEMBER, 7-28 January 1968.

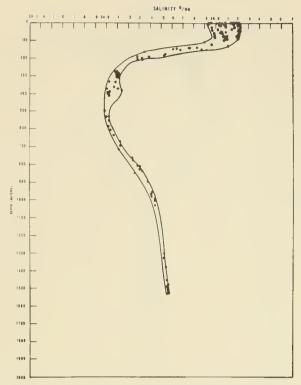


Figure 39.—Envelope of salinity versus depth at oceanographic stations taken by USCGC WACHUSETT at Ocean Station NOVEMBER, 28 January-18 February 1968.

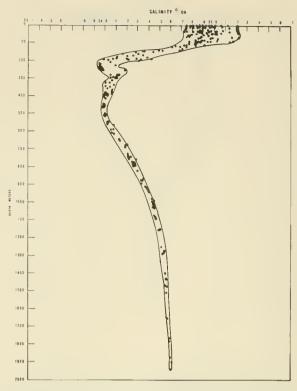


Figure 40.—Envelope of salinity versus depth at oceanographic stations taken by USCGC TANEY at Ocean Station NOVEMBER, 18 February-10 March 1968.

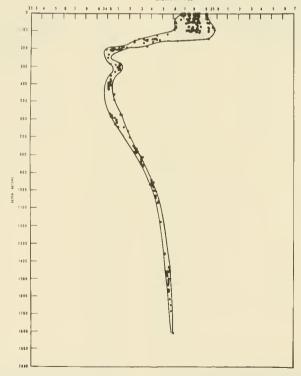


Figure 41.—Envelope of salinity versus depth at oceanographic stations taken by USCGC PONTCHAR-TRAIN at Ocean Station NOVEMBER, 10-31 March 1968.

Explanation of Oceanographic Station Data

A. Description of Entries, Units and Codes on NODC Station Listing

1. Surface Observations

Entru Description of Field NODC REF. ID. NO. NODC reference identity number.

COUNTRY CODE Indicates nationality of the institute or agency conducting the survey or expedition. CRUISE NUMBER A reference number assigned by NODC for storage-retrieval purposes. NODC

Publication C-1, Reference Sources of Oceanographic Station Data, gives complete

bibliographic and other pertinent information for each cruise.

Alphabetic representation of ship's name (or ICES numeric ship code). SHIP CODE

Degree, minutes, and tenths of minutes, N or S. LATITUDE LONGITUDE Degrees, minutes, and tenths of minutes, E or W.

The letter D appears in this column if extensive drift occurred while on station. DRIFT INDICATOR MARSDEN SQUARE

10° Marsden square number according to the Marsden square system.

The one-degree square number according to the Marsden square system. 1°

Date and time given by the originator (GMT) STATION TIME (GMT) MONTH Month (GMT)

DAY Day (GMT)

GMT to nearest tenth of an hour. HR. 1/10

YEAR

Alphabetic or alpha-numeric designator as assigned by the originator. If the year ORIGINATOR'S CRUISE of the cruise forms part of the cruise numbering system, the year digits are found NUMBER

in preceding field.

Originator's station number or designator. STATION NUMBER

Corrected or uncorrected sounding depth in meters. DEPTH TO BOTTOM

MAX. DEPTH OF SAMPLES

Depth of deepest sample in hundreds of meters to nearest hundred-meter interval.

Direction from which the dominant waves are coming, in tens of degrees, according WAVE OBSERVATIONS to WMO Code 0885. DIR.

Height of dominant waves according to WMO Code 1555. HGT. Period of dominant waves according to WMO Code 3155. PER.

Sea amount (sea state) according to WMO Code 3700 (preceded by the letter A). SEA AMT.

If preceded by the letter X, weather according to WMO Code 4501. A numeric WEATHER CODE

two-digit entry indicates weather according to WMO Code 4677.

This field is used either for recording instrument code when electronically obtained *INSTR./CLOUD

data are being reported, or for reporting cloud type and cloud amount when con-

ventional Nansen cast data are being reported.

A two character code representing instrument package of system. *INSTR.

Cloud type according to WMO Code 0500. TYPE Cloud amount according to WMO Code 2700. AMT.

Assigned by NODC for data storage and retrieval purposes. The NODC Reference NODC STATION Identity and Station numbers combined, uniquely define each station in the NODC NUMBER

archives.

Entry

*DT/*S"/D This indicator specifies that the reported data have been obtained electronically

rather than by Nansen-type casts. U (up) and D (down) are cast indicators for electronically obtained serial data and specify that the data were taken while

Description of Field

hoisting or lowering respectively.

WATER COLOR Water color according to Forel-Ule Code.

TRANS. (m) Water transparency in meters as determined by Secchi disc.

WIND Direction from which wind is blowing in tens of degrees, according to WMO Code

0877.

SPEED OR FORCE If preceded by letter S, wind speed in knots; if preceded by letter F, wind force in

Beaufort code.

BAROMETER (mbs) Barometric pressure in millibars; tens, units, and tenths places only.

AIR TEMPERATURE °C

DIR.

DRY BULB Dry bulb air temperature in degrees centigrade, to tenths.

WET BULB Wet bulb air temperature in degrees centigrade, to tenths.

VIS CODE Visibility according to WMO Code 4300.

NUMBER OBS, LEVEL The number of observed levels associated with the station.

SPECIAL Entries in this space vary with individual cruises or stations. Information con-

OBSERVATIONS cerning entries in this field can be requested from the NODC.

2. A complete description of the codes can be found in NODC publication M-2 (Rev. August 1964), "Processing Physical and Chemical Data from Oceanographic Stations."

TABLE I. Observed and interpolated oceanographic data for stations taken by USCGC KLAMATH at Ocean Station NOVEMBER, 20 March-8 April 1967, prepared from NODC Listing No. 31-1079 KL.

	,										_				-		MAX.				_					1
REFERENCE	SHIP	LATITU	DF	LONGITUOE	DCTA	MARS SOU		STATION GAT	IME	YEAR	, L	RUISE	INATO		_	OEPTH	DEPTH	08	WAVE SERVATION	TH	EA-	CLOUD		s	NOOC	
CODE NO.	COOE	1/10		1/16		10*	1.	MO OAY	HR,1/10			NO.	STATION NUMBER			BOTTOM	S'MPL"	S DIR.	HGT PER	EA CC	DE	TYPE AMI		- 1	UMBER	
311079	KL	3001		140005	W	123		03 20	190	196	7	NO5 0	01			4663	14	24	3 6	X	1	8 6			0001	
1 2 2 1 2	1 1				!		WAT		WIND	<u>' </u>	A RO-		EMP.	°C		NO.			1-1-1	,	,				000-	
								TRANS. OIR.	SPEE	D W	ETER	ORY	V	VET	VIS.	20.0		CIAL /ATIONS								
							COOE	(m)	FOR	E	mbs)	BULB	-	ULB	_											
								20	50	4 2	230	189	1	83	8	14	L.,				_					
	MESSENGR TIME	CAST	CAR		-l (m)	1	°C	s */	510	MA-T		PECIFIC VD		S OY	Δ O. M	so	UNO	02 ml/l	PO4-P	TOTAL		NO2-N	NO3-N	SI 04-5i	ρН	s C C
	HR 1/10	NO.	TYP									ANOMALY-	-11107	X	103	VELO	OCITY		yg - at/1	≥8 - e	1/1	μg - σt/l	yg - 01/1	μg = σ1/l		C
									1					I												
			ST	0 00	00	1	888	3510	2 5	15		00282	42	0.0	00		191									
	190		OBS			-	888	35104		15							191									
	190)	089				879	35102		17		00300	, ,	0.0			190									
			ST				877 864	3510 3510		517		00280 00277			28		190 188									
	190	,	OBS				857	35097		522		00211	01	00	, , 0		187									
	190	,	ST				857	3509		522		00277	0.0	0.0	84		187									
	190	3	083				849	5507	۵.	, , ,		00211	00	0.0	, , ,	~ ~										
	4		S 1				839	3505	2 !	523		00276	28	01	39	15	185									
	190)	OBS		68	1	809	35013	2 !	528						15	179									
			S 1		75	1	807	3500		527		00273	17	0.2	0.8		179									
	190)	085			_	786	34948	-	529							175									
			S1				750	3487		531		00270			276		165									
	100		51		25 39		648 589	3469 34594		542		00260	85	0.3	342		136									
	190	,	083				537	3452		554		00249	79	0.4	+06		104									
	190)	089				373	34328		574		00247	, ,				055									
			51				327	3431		582		00223	60	0.5	24	15	042									
			51	0 02	50	1	154	3423	26	510		00198	21	06	30	14	990									
	190)	OB3	0.2	83		055	34159		622							959									
			ST				012	3411		626		00183	44	07	725		946									
	190)	089				836	33924		64C		001/5	0.0	0.1	399		891									
			S1		00	-	803 668	3394		646 669		00165)54		847									
			S.		00		557	3404		687		00143			188		819									
			2.		00	_	472	3410		701		00112			308		802									
	190)	OB:		23	_	456	34108		704							799									
	- 1		S		00	0	418	3423	2	718		00097	15	14	13	14	798									
	190	0	08		92	0	378	34346	2	731						14	798									
			S		00	_	375	3435		732		00084			03		798									
			S.		00		340	3439		738		00077			84		800									
			S.		00		313	3443		744		00072			559		806									
			S		00		294	3448		749		00067			729 795		815									
	100	2	S'		60	_	284	3452		754 756		00063	94	ī	170		837									
	190	J	OB:	5 12	00	U	201	24240	4	100						1 4	001									

TABLE I.—Continued

							_	1115				.11000	^									
REFERENCE SHIP LATITUDE LONGITUDE ED SI				MARSDEN	Т	STATION TO	STATION TIME		ORIGINATOR'S			DEPTH	MA		WAVE		CLOUD			NDDC		
CTRY ID.	CODE	LATITUDI		NGITUDE NOTE	SQUARE	┸	(GMT)		YEAR		TATIO		TO BOTTOM	DF	. 0"	DBSERVATIONS		CDDES		S1	UMBER	
CODE NO.			1710		10' 1'	-	O DAY H			 	UME	, c n		S'M PI		HGT PER SE		1111	1			
31 1079	KL	30035	N 13	3957 W	122 0			.92	1967	NO5 00			4389	1	1 20	3 9	X1	6 7	1	-	0002	
						WATE		SPEED	BAR			VIS.	NO.	SI	PECIAL							
					COL	.OR 1	RANS. DIR.	FORCE	1-1-		8 LI		DEPTHS	DBSER	RVATIONS							
						\dashv	19	522		3 200	21	00 7	14									
	MESSENGE					-				SPECIFIC VOLU		≥△D	T	UND	T .	PO ₄ -P		NO. N	NO. N	SI O4-Si		5
	TIME	of NO.	CARD	DEPTH (m)	1 °C		s */	SIG	MA-T	SPECIFIC VOLU		DYN. M. x 10 ³		DCITY	02 ml/	μg + α1/1	101A(-P yg - e1/l	NO2←N µg - al/l	NO3-N up - ot/l	yg - al/l	pН	c
	HR 1/10	-		1	-	-					-	× 10	+									+
	ļ			0000	107	,	3500	2 5	17	002802	0	0000	1.5	187	1						1	11
	19	2	STD OBS	0000	187 187		3509 35087		17	002002	Ö	0000		187								
	19.	_	085	0007	187		35092		19					187								
	17	_	SID	0010	187		3509	-	18	002794	4	0028		188								
			STO	0020	186		3509		19	002793		0056		189								
	19	2	OBS	0022	186		35089	25	19				15	189								
			STO	0030	185		3509		21	002776	0	0084		188								
	19	2	OBS	0037	185		35081		22					187								
	1.0		STD	0050	184		3508		24	002750	6	0139		186								
	19 19		OBS OBS	0055 0074	184 183		35076 35077		525 526					187								
	7.7	۷	SID	0075	183		3507		27	002737	1	0208		187								
			STO	0100	171		3499		648	002544		0274		157								
	19	2	OBS	0119			34918															
			STO	0125	160	8	3482	25	61	002425	5	0336	15	126								
			STD	0150	150	-	3448		559	002450	8	0397		092								
	19	2	OBS	0152	149		34454		559					090								
	1.0	_	STD	0200	128		3427		87	002189	8	0513		028								
	19	2	OBS STO	0226 0250	120 115		34200 3419		599 507	002006	1	0618		988								
			STD	0300	104		3416		523	001861		0714		960								
	19	2	OBS	0300	104		34156		523	301001		3.27		960								
	/	_	STO	0400	085		3405		547	001642	3	0890		903								
	19	2	OBS	0451	075	9	34016	26	558				14	875								
			STD	0500	065	8	3402	26	572	001401	2	1042	14	843								
	19	2	OBS	T0597	051		34014		590					800								
			STO	0600	050		3401		591	001221		1173		799								
	10	2	STD	0700	044		3402		598	001156	5	1292		791								
	19	2	OBS STD	T0751 0800	042		34017 3404		700 705	001091	4	1404		788 788								
			510	0900	036		3413		715	000990		1508		790								
			STD	1000	033		3426		728	000873		1601		798								
			STD	1100	032		3444		744	000734		1682	14	812								
	19	2	085	1123	032	6	34485	27	747				14	816								

ER	IO.	SHIP	LATITUOE 1/1	1	NGITUOE TE	MAR: SOU	ARE	STATION TI (GMT)	YEAR			TATION UMBER		OEPTH TO SOTTOM	OEPTH OF S'MPL	085	WAVE ERVATIONS	WEA- THER CODE	CLOUD CODES		ST	OOC ATION UMBER	
,	1070	V1			9585W	122				-	25 20	2		200	1								
T)	1079	KL	30021N	1 10	4282W	122	WAT		195 196	IN	05 00 AIR TEA			+206	14	13	4 6	X1	7 6	I	1 1	0003	
							$\overline{}$	-	SPEED ME				VIS.	NO. 085.		CIAL							
							COLOR	TRANS. OIR.	OR (m)		QRY BULB	WET	COOE	OEPTHS	OBSERY	A TIONS							
								100	10-41		. 22	3.5.4	1-		-								
							L	31	514 2	00_	172	156	8	14	<u> </u>		1						
		MESSENGR TIME O	CAST C	ARO	OEPTH (m)	1	*c	s %.	SIGMA-T	SPE	CIFIC VOLU		Δ O.		UNO	O2 ml/l	PO ₄ -P	TOTAL-P	NO2-N	NO3-N	\$104-SI	ρН	5
		HR 1/10	T NO.	YPE					"-	^'	NOMALY-XI		103	VELO	DCITY	- •	yg = 01/f :	yg = 01/1	μg ~ qt/l	yg - a!/!	yg - e1/l		C
																							П
			1 [STO	0000	1	858	3507	2520	1 0	02776	ກໍ ດ	000	15	182		1 1	'			'		1.
		195		BS	0000		858	35071	2520	_	0=0				182								
		195		BS	0008		854	35073	2521						183								
				STO	0010		854	3507	2521	0	02768	4 0	028		183								
				STO	0020	1	852	3507	2522		02768		055		184								
		195	0	BS	0029	1	848	35070	2522					15	184								
				STD	0030	1	847	3507	2523	0	02760	6 0	083	15	184								
		195	0	BS	0044	1	838	35063	2524					15	184								
				STD	0050	1	837	3506	2525	0	02749	6 0	138	15	184								
		195	0	BS	0068	1	832	35050	2525					15	186								
				STD	0075		824	3503	2525	0	02750	1 0	207	15	185								
		195	0	BS	0088	1	799	34979	2528					15	179								
				STD	0100		747	3488	2533		02687		275	15	164								
				STD	0125		634	3469	2545	0	02577	4 0	341		132								
		195		BS	0133		596	34630	2549						121								
				STO	0150		505	3450	2559	0	02444	7 0	403		094								
		195		85	0177		377	34346	2575						055								
				STO	0200		294	3430	2588		02179		519		031								
				STD	0250		134	3420	2611	0	01968	3 0	623		982								
		195		BS	0267		087	34176	2618				-		968								
				STD	0300		014	3413	2627	0	01823	0 0	718		947								
		195		BS	0357		893	34064	2642	_	0.2570		202		911								
				STO	0400 0500		796	3405 3400	2655 2677		01560 01350		032		881								
		195		STD BS	0540		556	33982	2682	U	101220	o 1	032		824								
		177		STO	0600		503	3404	2693	0	01194	Q 1	159		797								
				STO	0700		436	3414	2709	-	01050	-	272		787								
		195		BS	T0727		422	34167	2712	0	01000	7 1	212		786								
		17.		STO	0800		405	3425	2721	0	00941	6 1	371		792								
				STD	0900		381	3434	2730		00341		461		800								
		195		BS	T0915		378	34350	2731	0	.00000	_ 1	.01		802								
		1,75		STD	1000		359	3441	2738	0	00785	9 1	543		809								
				STD	1100		338	3447	2745		00724		619		817								
				STO	1200		317	3451	2750		00677		689		825								
				STO	1300		297	3453	2753		00646		755		834								
		195		BS	1395		279	34539	2756						842								

																	_				_	,			
REFERENCE	SHIP	LATITU	DE I	ONGITUOE SOUTIONO	MARS	DEN	STAT	ION TI	IME	YEAR	-	ORIGIN			OEPTH TO	M AX		SERVA	VE	WEA-	CLOUG		1 2	ATION	
CTRY IO.	COOF		1/10	1/10	10*		MO I C		R.1/10	7,51410			STATIO BM UP		BOTTON	S'MPL	1		PER SEA	COO6	TYPE AM	_)		UMBER	
311079	KL	3001	5N 1	40000W	123			\rightarrow	005	196	7 6	105 00	/.		4572	16	35	4	4	V 1					
· JIII	1 1/1	3001	214 1	. 40000 M	123	WAT			VINO			AIR TE		: 1	NO.			וייין	41	1 X1	6 6 5	1	4 1	0004	
						COLOR	TRANS.	OIR.	SPEED		TER	ORY	WE		O85.	ODEED	CIAL VATIONS								
						CODE	lm I	Oth	FORC	E [m1	lad	BULB	BUL	. B	DEPTHS	1		ļ							
								03	512	2	54	189	18	3 8	14										
	MESSENGR		CARO	OEPTH (m)		°C		٠/	510	MA-I		ECIFIC VOLU		₹ ∆ o	so	סאט	O 2 m1/	, P	04-P	TOTAL-P	NO ₂ -N	NO ₃ -N	SI O4-SI		S
	TIME HR 1/10	NO.	TYPE	OEFTH (M)	'	C	,	***	316	ma-i	^	NOMALT-X1	07	X 10 ³	, AEF	OCITY	U 2 m1/		+ 01/1	μg = o#/	1/10 - gu	µg - a1/1	pg - 01/1	pН	C
																									П
	1	' '	STO	0000	1	862	350	80	25	20	' c	02779	8	0000	15	184		,	- 1		,	ı	'		
	00	5	085	0000	1	862	350	79	25	20						184									
			STD	0010	1	852	350	80	25	22	C	02760	7	0028	15	182									
	00	5	085	0010		852		77		22						182									
			STO			847	350			23		0 2 7 5 7		0055		183									
		_	STO			843	350	_		23	C	02756	2	0083		183									
	00	5	085	0034		842		060		23			_			183									
	0.0	_	STD			841	350			24	(002758	9	0138		186									
	00	5	085 STD	0054	_	839 814	350	063		24	_	002710	,	0307		186									
	00	5	085	0084		808		036		30		02719	Ţ	0206		182									
	00.	,	STO			805	350			31		02709	3	0274		183									
	00	5	OBS	0109		804		038		31		702103	_	0214		184									
		_	STO			680	349			51	C	02520	3	0340		149									
			STO	0150	1	508	34	73		76		02283		0400		098									
	00	5	OBS	0163	1	430	342	200	25	530															
			STO			253	344	-		08	C	01991	4	0507		019									
	00	5	OBS	T0217		186	34:			15						997									
			STD			122	342			19		001888		0604		979									
	0.0	_	STD			027	34:			28	C	001815	5	0696		952									
	00!	2	0BS ST0	0323		983 838	34	134		32	_	001610	,	0010		939									
	00	5	085	T0428		788		028		55		001619	4	0868		897									
	00,	,	STD			653	340			75	-	01374	4	1018		841									
			STO			511	340			94		001189		1146		801									
	00	5	OBS	0641		468		069		00						790									
			STD			441	34:			0.8	C	01056	3	1258		789									
			STD	0800	0	403	342	24	27	20	C	00946	6	1358	14	792									
	00	5	OBS	T0854		386		292		26					14	794									
			STO			376	343			31		000849		1448		798									
	0.0	-	STD			356	344			39	C	00775	0	1529		807									
	00	5	085	T1059		344		459		43				1/0		813									
			STO			336	344		_	45		000723		1604	_	816									
			STD			316	344			49		000689		1675		825									
			STD			298 279	345			52		00657		1742		834									
			STO			261	345			56 59)00624)00591		1806		843									
	00	5	085	1584		247		583		62		,000,91	U	1007		861									
			000	1207	0	_ , ,	J 4.		2 1	52						001									

FERENCE	SHIP				Ĕ.	MARSDEN	STATION TH			ORIGINA	ATOR'S		DEPTH	MAX.		WAVE		WEA-	CLDUD			NODC
ID.	CDDE	LATITU		ONGITUDE	INDC	SOUARE	(GMT)	YEAR	CRUI		TATION		TO MOTTOR	. 01		SERVATIO		CODE	TYPE AM			TATION
_			1/10	'1/10	-		MO DAY HE		-			-		3 mrL	1		SEA					
1 1079	9 KL	2832	ON 1	40020W	10			95 1967	NO			,	4663	11	31	4 2		X1	614	I	- 1	0005
						WAT		SPEED MAT		AIR TEA		VIS.	NO.		CIAL							
						COLOR	TRANS. DIR.	OR IMB		ORY BULB	WET	CODE	DEPTHS	DESER	ZATIONS							
							0.8	519 23	-	189	178	8	13									
		1			_		100	317 23		10,			1			1	-					
	MESSENGR		CARD	DEPTH (m	, [7 °C	s °/	SIGMA-T		OMALY-X	Gr I D	M. M.		OCITY	D ₂ ml/	PO4-		TAL->	NO ₂ -N	NO3-N	51 Da-5	
	HR 1/10		ITE							O		t 10 ³	V 2 C	OGIII		yg - 01	/ "	10 - 01/1	μg = a1/1	ا/ra - ور	yg - at/	'
																						1
	1		STD			1976	3519	2499	0.0	2976	3 0	000		217								
	19	5	OBS	0000		1976	35192	2499						217								
			STD			1969	3519	2501	0.0	2962	4 0	030		217								
	19	5	OBS	0010		1969	35192	2501				0 = 0		217								
			STD			1967	3519	2501		2961		059		218								
		_	STD	-		1965	3519	2502	0.0	2960	/ 0	089	15	219								
	19		OBS	0031			35190															
	19	5	OBS	0047		19810		24980			_											
		_	STD			1961	3519	2503	00	2957	5 0	148		221								
	19	5	OBS	0073		1956 1937	35173 3517	2503 2507	0.0	2921	0 0	222		223								
	19		STD	0079		1790	35165	2544	0.0	72721	9 0			179								
	17	2	STO			1781	3515	2545	0.0	2570	0 0	290		178								
			STD	-		1733	3505	2549		2539		354		166								
	19	5	OBS	0138		1702	34986	2552	0.0	2237		224		158								
		-	STD			1642	3491	2560	0.0	02442	9 0	416		141								
	19	5	OBS	0185			34680															
			STD	0200		1413	3454	2582	0.0	02239	3 0	533	1.5	073								
			STD	0250		1215	3420	2596	0.0	02115	7 0	642	15	011								
	19	5	OBS	0272		1138	34098	2602					14	986								
			STD			1052	3407	2616	0.0	01931	6 0	744		960								
	19	5	OBS	T0362		0884	34034	2641						908								
			STD			0803	3404	2654		01575	-	919		883								
		_	STD			0635	3405	2678	00	01344	3 1	065		834								
	19	5	OBS	0534		0592	34054	2684				10.		823								
			STD			0549	3414	2696		01178	-	191		817								
	1.0	6	STO	0700 10700		0491 0491	3425 34252	2711 2711	0(01033	ן כ	302		+812								
	19	כ	OBS			0491	34252	2725	0.0	00911	2 1	399		+812								
			STD			0442	3442	2734		00821		485		811								
			STD			0373	3447	2741		00757		564		815								
			STD			0352	3451	2747	-	00711		638		824								
	19	5	OBS	T1113		0350	34512	2747						825								

REFERÊNCE	21112	LATITUOE	LONGI		MARS	DEN	STATE	ON TIA		re a R			ATOR'S		DEPTH	M AX		WA	VE 'A TIONS	WEA-	CLOUG			NODC	
CODE ND.	CODE	1/10		1/10	10°		MD D			iens.	CRUISE NO.		TATION UMBER		BDTTON	S'MPL			T PER SE	CODE	TYPE AM	-		STATION NUMBER	
311079	KL	30020N	1400		123			\rightarrow		967	N05	00	6		4389	15	+	_	4	Х6	68			0006	
, j	1					WAT		_	IND	BARC	A	IR TEA			I NO.	1	CIAL	֝֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	1 . 1	1 20	1 0.0	1	'	0000	
						CDLOR	TRANS.	DIR,	SPEED	METE	R D	RY JLB	W ET BULB	COD	200		VATION!	s							
						CODE	1m1	25	S05	12				1	-			-							
		1					, 1	25	1	12	7 1:	50	150		14	1		1							1
	MESSENGR TIME		ARO I	DEPTH (m)	T	°C	s '	/	SIGM	A-T	SPECIFIC		VE D	YN. M	SO VEL	UND DCITY	O 2 ml		PO4-P rg = e1/1	TOTAL-P ا/se - ور	NO2-N ug - at/l	NO3-N	\$104-5		S
	HR 1/10				-				1					X 10 ³	-			-,'	19 - 01//1	py - 6171	pg - do i	µg - at/l	yg - at/		1,
		1 1		0000	1		250			١			1		1			- 1						1	-1
	197	S 0В		0000		32	3502		2523		0027	511	0 (000		174									
	197	ОВ		0009		30	3502		2524						15	74									
			~	0010		30	350		2524		0027	437	0.0	27		176									
		S	TD	0020	18	29	3504		2525		0027)55		177									
		_		0030		128	3505	5	2526	5	0027	324	00	280		179									
	197	ОВ		0031		8.58	3504		2526						15	179									
	197	ОВ		0049		129	3506		252							182									
				0050 0075		129	3506 3503		2526		0027			137	15										
	197	0B		0075		107	3502		2529		0027	121	U a	205	15	180									
	197	08	_	0097		56	3500		2541						15										
			~	0100		40	3499		2542		0025	992	0.2	271	15										
		S	TD I	0125	16	12	3476		2555	5	0024			335	15										
	197	08	S (0145	15	14	3459	90	2564	4					150	97									
				0150		89	3455		2567		0023	746	0.3	95	150										
	197	ОВ		0193		96	3424		2583						150										
				0200		80	3423		2585		0022			10	150										
				0300		66	3411		2600		0020		-	717	149										
	197	08		0333		84	3408		2628		3017	202	0	1 /	140										
	197	OB.		0390		31	3403		2649						148										
		S	TD (0400	0.8	37	3404	4	2653	3	0015	815	0.8	392	146	385									
				0500		09	3403		2680		0013	247	1 (38	148										
	197	08.		0580		98	3402		2693						141										
				0600		86	3405		2696		0011			62	147										
	197	0B		0766		.07	3422		2719		0010	520	1 4	272	141										
	171			0080		00	3426		2722		0009	283	3.7	370	14										
				0900		79	3436		2732		0008			59	149										
	197	08	S (0964	03	66	3440) 6	2737	7					148	305									
				1000		59	3442		2739		0007			40	148	309									
				1100		39	3445		2743		0007			16	148										
				1200		20	3445		2747		0007			88	148										
				1300 1400		83	3451	-	2751		0006			757		335									
	197	08		1470		70	3454		2759		0006	302	13	322	148										
	271	00	5	1 - 10	0.2	, 0	5475	, 7	2100	,					146	100									

																					,		,		
REFER		SHIP	LATITUI	DE 10	NGITUDE ES	NAR!	ARE	7 A 7 2	ION TO	ME	YEAR			ATOR'		GEPT TO	" DE	AX.		WAVE RVATIONS	WEA-	CLOUD			NODC
CTPY	10.	CODE		1/10	NGITUDE BOY	10°			DAY IH	8.1/10	15110	CRUISI		SMUN		80110		OF APL'S		HGT PERT SE	- 0000	TYPE AM	.[N N	RESMU
2.1	1079	KL	2958		1004 W	087	1				10/7	100		-		. 20							1		
2 11	1075	1 2 1	2770	DIA Is	1004 W	081	A N W			201	1967			MP. "C		429		19	10	4 3	X3	1 618	1	- 1	0007
							COLOR	TRANS.	_	SPEED	METI	<i>></i> -	OPY	WE.	VIS			SPECIA	L						
							CODE	(m)	OIR.	FORCE	(mbs		ULB	BUL		DEPTH		SERVAT	IONZ						
									09	518	29	5 1	67	14	4 7	14									
		MESSENGR	1		1			-		T	1 - /	, , , , , , , , , , , , , , , , , , ,		L		1				1					
		TIME		CARD	GEPTH (m)	T	*C	2	1/00	51G N	T-A		C VOLU	JME 10 ⁷	₹ A D	λ. ³	ELOCIT		2 ml/l	PO4-P pg = 01/1	TOTAL-P	NO2-N ug - o1/I	NO3-N	SI O4-Si µg - ai/I	pН
		HR 1/10	1					1		-				\rightarrow	x 10 ³					pg = 01/1	yg = 01/1	pg - 0// 1	yg - at/l	pg = diy1	
			1 1					1						-											
				STD	0000	1	807	35	06	25		002	2665	3	0000	0 1	516	8							
		201	1	OBS	0000		807	350	057	25						1	516	8							
				STD	0010		807	35		25		002	2666	4	005	7 1	516	9							
		201	1	OBS	0016		807		067	25		0.0			00.5		517								
				STD	0020		807	35		25			2664		005		517								
		201	1	STD	0030		806	351		25		002	2668	8 8	0080		517								
		201	ı	08S STD	0041		808	35	062	25		00	2678		013		517								
		201	1	085	0066		811		070	25		004	(0/8	50	013.		517								
		201	L	STD	0075		811	35		25		00	2689	9.0	020		518								
				STD	0100		809	35		25			2697		026		518								
		201	1	OBS	0102		809		065	25		002	.0.71	,	020		518								
		20.	_	STD	0125		669	34		25		0.03	2611	8	0334		514								
		201	1	OBS	0134		618		650	25		000	.011	. 0	0 2 3 .		512								
			•	STD	0150		546	34		25		002	502	5	0398		510								
				STD	0200		324	34		25			237		051		504								
		201	1	085	0200		324		300	25					V - 2		504								
		201	1	085	T0248	1	118	34	195	26	14						497								
				STD	0250	1	115	34	19	26	14	00	941	9	062	1 1	497	6							
				STD	0300	1	040	34	15	26	24	00	1852	2.3	071	6 l	495	7							
		201	1	OBS	0380		902		091	26							491								
				STD	0400		856	341		26			1632		0890	-	490								
				STD	0500		655	341		26		00	1408	3 2	104		484								
		20]	1	OBS	T0503		650		998	26							484								
				STO	0600		517	341		26			1189		1177		480								
		201	,	STD	0700		417	34		27		00	020	9	128:		478								
		201	Ţ	OBS	0762		375		204	27.		0.00	014	. c	137		477								
				STD	0800 0900		375 372	34:		27)914)844	-	1379		478								
				STD	1000		363	34		27			790		146		479								
		20	}	065	T1021		360		423	27		000	, , , , (, ,	174,		481								
				STD	1100		341	34		27		000	735	5	162		481								
				STD	1200		319	34		27			687		169		482								
		20]	l	OBS	1280		303		527	27							483								
				STD	1300		299	34		27		000	648	36	176		483								
				STD	1400		280	34		27			622		182		484								
				STD	1500	0	263	34	56	27			598		188		485								
				STD	1750		228	34		27	-)544	-	203	_	488								
		201	l.	085	1945	0	207	341	519	27	68						490								

REFERENCE	SHIP			F	MARS	DEN	T NOITATE	IME .			ORIGIN				DEPTH	MAX. CEPTH		W	A VE /A TIONS	w	EA-	Crond			NOOC
CTRY ID.	COOE	LATITU	1/10	LONGITUDE	10°	- 1	(GMT)	D 1/10	YEAR	CRU		MUN			10	OF S'MPL'S			T PER SE	1 00	HER DOE	TYPE AM			TATION
		3000					1		10/					10	\rightarrow		1	+	5		. 7				
31 1079	H KL	3000	N I	14000 W	123	WAT		189	196		00 AIR TE		=	_	572 NO.	15	04	1 4	121	1 2	(2)	618	1	1	18000
					ŀ		TRANS. DIR.	SPEED	BAR		ORY	WE	T COL	5. (OBS.		CIAL								
						COOE	(m) (m)	FORC	E (mb	180	BULB	BUI	.8	CI	EPTHS										
							03	508	28	80	172	14	+4 8		14										
	MESSENGR	CAST	CARD		,	*c	s ·/	616		SPEC	IFIC VOLU	ME	Z △ U	D.	SOUN	40	O2 ml/		PO ₄ -P	TOTA	L-P	NO2-N	NO3-N	SI O4-5	
	HR 1/10	OF NO.	TYPE	DEPTH (m)	'		3 /00	310	A/A —T	ANI	OMALY-XI	67	X 10 ³	3	VELOC	SITY	02 ////	` .	yg - at/l	yg • q	171	μg ~ σt/l	μg = α1/I	μg - σ1/1	PН
										\top															
	I	1	ST	0000	1	806	3505	25	31	00	2667	3 '	000	0 '	151	67		,			,			'	
	18	9	085	0000	1	806	35051	25	31						151	67									
	18	9	OBS	0009	1	806	35049	25	31						151	69									
			ST			806	3505		31		2672		002		151										
			STI			806	3505		31	00	2678	3	005	3	151	71									
	18	9	085			7970 807	35044 3505		33Q 31	0.0	02683	1	008	0	151	72									
	1.0	_	STI							0(12003	1	000	0	_										
	18	9	OBS	0045 D 0050		807 807	35048 3505		31	0.0	02689	7	013	/.	151 151										
	18	0	085	0068		808	35044		30	00	22009		015	4	151										
	10	7	ST			807	3504		30	0.0	2702	1	020	1	151										
	18	9	085			806	35037		30			_		-	151										
	-	_	STI			736	3490		37	0.0	02647	1	026	8	151										
			ST			562	3457		552		02507		033		151										
	18	9	OBS		1.	472	34424	25	61						150	81									
			ST		1	422	3438	25	68	0 (02360	16	039	4	150	66									
•	18	9	OBS	T0198	1	220	34204	25	95						150	04									
			ST			215	3420		96		02103		050		150										
			ST			099	3418		16	0 (01921	2	060	6	149										
	18	9	OBS			011	34146		29				0/0		149										
	1.0	_	ST			997	3414		31	01	01787	۵	069	8	149										
	18	9	OBS			846	34051 3405		48 52	0.1	01590		086	7	148										
			ST			622	3403		78		01344		101		148										
	18	0	OBS			515	34009		89	01	01544		101	7	147										
	10	_	ST			499	3403		93	0.0	01197	4	114	1	147										
			ST			443	3413		707		01066		125	_	147										
	18	9	OBS	T0782	0	408	34214	27	718						147	790									
			ST	D 0800	0	404	3423	27	719	0.0	00955	2	135	5	147	792									
			ST	D 0900	0	384	3433	27	729	0	00866	2	144	7	148	301									
	18	9	OBS	0973	0	369	34392	27	736						148										
			ST			364	3441		738		00791		152		148										
			ST		_	344	3447		744		00731		160		148										
			ST			324	3452		750		00678		167		148										
			ST			304 285	3455 3455		754		00639 00623		174		148										
	18	0	ST OBS			271	34550		756 757	0.0	00023	1	100)	148										
	10	7	003	11412	C	211	J4750	2 1	101						140	, , _									

REFERENCE				_ #	MARSDEN	STATION TIA	ΛE	ORIGINA	TOR'S	DEPTH	MAX. DEPTH	WAVE	WEA-	CLOUO			1000	
CTRY ID.	COOE	LATITU	DE LO	DINGITUDE E	SOUARE	(GMT)	YEAR		ATION	TO BOTTOM	OF	DBSERVATIONS	THER	CODES			UMBER	
CODE NO.	0001		1/10	1/10 =	10, 1,	NO DAY HR	.1/10	NO. N	J M BER		S'MPL'S OI			TYPE A M	1	-		
311079	KL	3000	N 1	4000 W			91 1967			4389	12 0	3 1 2	X 9	7 5		1	0009	
					WAT	ER W	SARC		VIS.	NO. OBS,	SPECIAL							
					COLOR	JRANS OIR.	SPEED METE		WET COO	DEPTHS	OBSERVATION	45						
					3331	03	S12 26		167 8	14								
						103	312 20	1 1 1 7 0										7,
	MESSENGR TIME O	CAST	CARD	DEPTH Im1	T *C	5 %.	SIGMA-T	SPECIFIC VOLUM	7 UTN. M	. SOU		PO4-P	TOTAL-F ug - 01/1	NO2-N ug - al/l	NO3-N pg - 01/1	51 O4→51 h8 - 84	pН	Ĉ
	HR 1/10	NO.	TYPE						X 103	7110	-	pg - 0// 1)y - 01/1	pg - 007	pg = 0171	99 - 007		4
	1		STD	0000	1807	3505	2531	0026733	3 0000									
	191		085	0000	1807	35046	2531			151								
	191		085	0008	1807	35045	2531			151								
			STD	0010	1807	3505	2531	002677										
			STD	0020	1806	3505	2531	0026783	3 0054									
	191	l	085	0026	1806	35046	2531 2531	0026825	5 0080	15)								
	101		STD	0030	1807 1809	3505 35049	2531	002662	0000	15								
	191	L	08S STD	0050	1808	3505	2531	002691	5 0134									
	191		085	0065	1807	35042	2531	002071	0.00	15								
	191		STD	0075	1808	3504	2530	002702	3 0201									
	191		085	0084	1808	35042	2530			15	181							
			STD	0100	1804	3504	2531	002706	8 0269	15	183							
			STD	0125	1797	3502	2532	002707	0 0337		185							
	191	l	085	0132	1795	35021	2532				185							
			STD	0150	1616	3469	2549	002545	3 0402									
	191	L	085	T0177	1399	34330	2569	003334	9 0522		062 036							
			STD	0200	1310	3428 3419	2583 2608	002224			986							
	191		STD 0BS	0250	1145 1113	34169	2613	001993	3 002		976							
	17.	L	STD		1023	3412	2625	001845	5 072		950							
	19	1	085	T0339	0940	34086	2636				926							
		•	STD		0825	3405	2651	001599	7 0899	5 14	892							
			STD	0500	0661	3399	2670	001423	1 104	7 14	844							
	19	1	085	0512	0644	33984	2672				839							
			STD	0600	0524	3403	2690	001228	1 117		806							
	19	1	085	10674	0453	34089	2703	001070			789							
			STD		0443	3412	2706	001073			790							
			STD		0408	3423	2719	000959	8 139		793 796							
	19	1	085	T0856	0390	34284	2725	000865	5 148		796 798							
			STD		0377	3432 3440	2729 2 7 38	000865			798 804							
			STO		0349	3446	2745	000701			811							
			STO		0305	3451	2751	000663			820							
	19	1	085	T1243	0298	34521	2753	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			825							

REFERENCE	SHIP	LATITU	05 10	NGITUOE NGITUON	MARSDE	N	STAT	ION T	IME	YEAR	-	SINAT			OEPTN	MAX. DEPTH	ORS	WAVE	WEA-	CLOUG			NODC	
CTRY ID.	COOE	•	1/10	1/10		- 1			R.1/10	ILAK	CRUISE NO.		TION		MOTTOS	S'MPL"		HGT PER SI	CODE				UMBER	
31107	9 KL	3000	9N 14	0017w	123	0 (04 (01	004	1967	NO5 0	10			4389	38	03	3 4	X 2	6 8			0010	
						WAT	R	٧	VINO	BAR	On AIR	TEMP.	. °C	VIS.	NO.	505	CIAL							
					CO	LOR	TRAINS.	DIR.	SPEED OR FORCE	1			WET	COOK	OBS. DEPTHS	OBSERV								
								01	516	22	7 183	3 :	156		06									
	MESSENGR TIME C	CAST NO.	CARD TYPE	OEPTH (m)	т 'С		s	1/44	SIG	7-AN	SPECIFIC VO		OYI	△ D N. M. 10 ³		DCITY	02 ml/l	PO4-P yg + o1/1	10TAL-P pg = 01/1	NO ₂ -N ug - al/l	NO ₃ -N νg - αι/1	51 O4-51 pg - 01/1	рĦ	200
																								T
	004	ŧ	085	T1660	024			584			2225					868								
			STD	1750	022		34!			64	00054					879								
	004		5TD 085	2000 T2148	020		340	623	27 27		0005	108				910 929								
		,	STD	2500	01		341		27		00046	85				982								
	004		085	T2619	016			549	27			-				000								
			STO	3000	015	55	341	66	27	76	00044	81			15	062								
	004	+	085	3097	015	3	34	666	27	76					15	078								
	004		085	3566	014	9	34	676	27	77					15	158								
	004	4	085	T3778	014	9	34	681	27	78					15	195								

REFERENCE				- E	MARSDEN	STATION TIA		ORIGI	NATOR'S		DEPTH	MAX, DEPTH	005	WAVE	WEA-	CLOUD			NODC	
CTRY 10.	CODE	LATITU	7/10 LO	NGITUDE NGCT	SOUARE	MO DAY HR	1/10	CRUISE NO.	NUMBE		BOTTOM	O.F.		HGT PER SE	0000				NUMBER	
	KL	3000		001 W			03 1967		1.1		2018		06	6 8	X1	7 5			0011	
31 1079	1 2 1	3000	114 17	.002 #	WAT		ND BAR	A ID T	EMP. °C	1	NO.		CIAL	10101	1 // 2			,	0011	
					COLOR	TRANS. DIR.	OR MET	ER ORY	WET	COD!	OBS.	OBSERV	ATIONS							
					CODE		FORCE		+-	+	7.									
						05	S25 24	0 161	14		14	L				1			1	T.
	MESSENGR TIME 0	CAST	CARD	GEPTH Imi	T °C	5 */	SIGMA-T	SPECIFIC VOL	1107	E A D	- SOI	OCITY	O 2 ml/l	PO4-P µg = 01/L	101AL-P ug - 01/1	NO2+N ug - at/l	NO3-N pg + a1/1	51 O4-		ç
	HR 1/10	1,,,,,							-	x 10 ³	-			-		-				-
					1026	2503	2524	00373	1	0000	1.6	176				1	!	l	1	- }
	003	>	STD	0000	1836 1836	3507 35074	2526 2526	00272	14	0000		176								
	003		OBS	0009	1834	35076	2526					177								
	000	,	STD	0010	1834	3508	2526	00271	83	0027	15	177								
			STD	0020	1833	3507	2527	00272	06	0054	15	178								
			STD	0030	1831	3507	2527	00272	35	0082		180								
	003	3	035	0031	1831	35069	2527					180								
	003	3	OBS	0048	1833	35071	2526	00 272		0120		183								
			SID	0050	1830 1808	3507 35038	2527 2530	00272	69	0136		183								
	003	3	035 STD	0074 0075	1808	3504	2530	00270	64	0204		180								
	003	2	OBS	0075	1808	35035	2530	00210	0 4	0 6 0 4		183								
	003	,	STD	0100	1799	3501	2530	00271	38	0272		181								
			STD	0125	1727	3484	2535	00267	81	0339	9 15	162								
	003	3	OBS	0144	1651	34704	2542					141								
			STD	0150	1612	3464	2546	00257	29	0405		129								
	003	3	OBS	T0195	1357	34276	2574			050		051								
			STD	0200	1337	3426	2576	00229		0526		992								
		-	STD	0250	1162	3416 34108	2603	00204	79	0635		4959								
	003	3	OBS	0287	1055	34108	2618 2622	00187	21	0733		+952								
	003	2	STD	T0385	0868	34026	2643	00101	~ 1	015.		+905								
	003	2	STU	0400	0834	3402	2647	00163	54	0908		4895								
			STD	0500	0639	3398	2672	00140		1060		4835								
	003	3	OBS	0575	0532	33953	2683] 4	4804								
			STD	0600	0512	3398	2688	00125		1193		+800								
			STD	0700	0446	3409	2704	00109	93	1310		4791								
	003	3	088	10768	0412	34162	2713			16.1		4789								
			STD	0800	0404	3420	2717	00097		1414		4791 4800								
	20.	^	STU	0900	0382	3429 34347	2726 2732	00009	22	100		4805								
	003	2	OBS STD	0966 1000	0360	34347	2734	00082	255	159		4808								
			STD	1100	0339	3439	2738	00078		167		4816								
			STD		0318	3443	2743	00074		1750		4825								
			STD	1300	0299	3446	2748	00070	16	182	2 14	4834								
			STD	1400	0281	3449	2752	00066	24	189	-	4843								
	001	3	088	T1484	0266	34519	2755				14	4851								

											.,													
Cool	REFERENCE	SHIP				MARS	OEN			We . B						MAX		WAVE	WEA				100C	
31 1079 KL 2828 N 1400 W 087 80 041 03 202 1967 NO3 012 4663 14 04 43 X1 616 0012			LATITU		ONGITUDE E					1						OF	1 00			1				
Wate Color Institute Institute Color Institute Institute Color Institute Institute Institute Color Institute I					1/101				1	1	+					1		1-1-1	-	1170 14.44	-			
COORDINATE COO	31/10/9	KL	2828	NII	4000 W	087				1967	NO				4663	14	04	4 3	Xl	1616	1	1	0012	
						-							_	VIS.		SP	ECIAL							
									R. OI	1 //			BULB	CODE	DEPTHS	OBSER	VATIONS							
Military CAST CAND DEPTH INT T TO S * %. SIGMA-I MECHE VERWIN STA, M. NOUND NO - M NO -								3	-		54	167	15/	7	14			1						
STO 0000 1904 3511 2511 0028608 0000 15196					1			11-	0 31	-	77	10,						1		1		ſ		
STU 0000		MESSENGR TIME 6			DEPTH Imi	Т	°C	s %	. SI	I-AME			ME D	NYN. M.	SOI		02 ml/						pН	č
202		HR 1/10				-					-			X 103	7			pg - 01/1	pg - 0//1) yg - 41/1	NB + 61/1	pg = uivi		
202													- 1											11
STD 0010											0.0	2860	8 (0000										
STD 0010 1897 3511 2513 0028465 0029 15196																								
STD 0020 1898 3511 2513 0028519 0057 15197		202	4								0.0	2000	e ,											
STD 0030 1898 3511 2513 0028580 0086 15199																								
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STD O050 1901 3511 2512 O028710 O143 15203																								
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STD		202										2011		, ,										
202			-								0.0	2880	0	1215										
STD 0100 1903 3511 2511 0028925 0287 15212 002894 0359 15216 15217 1		202	2			_					-													
202					0100	1	903				0.0	2892	5	0287										
STD				STD	0125	1	902	3511	2	512	0.0	2898	4 (359	15	216								
202		202	2	035	0136			3510	6 2	512					15	217								
STD O200 1564 3466 2559 O024687 Ob62 15123 STD O250 1324 3423 2577 O023016 O681 15048 202 OBS O271 1235 34116 2586 STD O300 1126 3408 2603 O020535 O790 14986 202 OBS T0360 O933 34020 2632 STD O400 O843 3401 2646 O016543 O975 14898 STD O500 O662 3400 2670 O014207 1129 14844 202 OBS O525 O627 33992 2674 STD O600 O559 3408 2690 O012352 1262 14821 202 OBS T0692 O494 34170 2705 STD O700 O491 3418 2706 O010868 1378 14811 STD O800 O456 3427 2717 O009874 1482 14814 202 OBS O885 O428 34334 2725 STD 1000 O394 3437 2725 STD 1000 O394 3437 2732 O008552 1664 14823 STD 1000 O394 3437 2732 O008552 1664 14823 STD 1000 O345 3444 2737 O008072 1748 14829 STD 1200 O345 3444 2742 O007630 1826 14836 STD 1300 O324 3447 2746 O007630 1806 1900 14855 STD 1400 O307 3451 2751 O006829 1970 14855											0.0	2789	6	0430										
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		202	2	085	T1402	0	307	3450	6 2	751					14	855								

																												,
REFERENCE						- #	MARS		STA	TION TI	ME			ORIGIN	ATOR"	5		OEPTH	MAX.	0.0		A VE	WEA-	CLOUG			NODC	
CTRY 10.	COOE	LATITU	-	LONG		NDC	sou			(GMT)		YEAR	CRU		TATIO		,	TO MOTTOR	OF S'MPL"	"		T PER SEA	COOK	TYPL AM			NUMBER	
CODE NO.			1/10		1/10		10*	1*	WO	DAY H	R.1/10		+-			.^	+											1
31 1079	KL	2820	N	1400	2 W		087	80 (190	1967	NO:			_	4	1114	15	04	٦ أ 3	12	X1	6 5		- 1	0013	1
								W.A.	1		SPEED	BAR		AIR TE	_	_ \	VIS.	NO.		CIAL								
								COLOR	TRAN	S. OIR.	OR	AA ET		ORY BULB	BUL		ODE	DEPTHS	OBSERV	'A TION !	3							
										- 02			-	107	16		8	14										
									<u> </u>	02	516	24		183	16:		_	Т.			+							1.
	MESSENGR TIME	CAST	CAR		DEPTH (m1	Т	°C	1	s */	SIGA	T-AN	SPEC	OMALY-X	ME 07	Z ∆ OYN.	. w.		OCITY	O 2 ml		PO4-P ug - a1/1	101AL-2 pg - o1/l	NO2-N	NO3-N	SI O4-1		ć
	HR 1/10	T NO.	TYPE	E											_	x 1	103	*****	JC///		-1'	pg - 0171			pg - 01/1	79 - 0		-
	1	' '	SI	ro '	0000		19	09	3	515	25	13	0	028414		00	00	15	198									
	190		085		0000			09		5151	25	13						15	198									
	190		085		0008			02	3	5147	25	15						15	197									
			ST		0010			102	3	515	25	15	0	028282	2	00	29	15	197									
			ST		0020			00	3	515	25	15	0	028266)	00	57	15	199									
			51	CD.	0030		18	399	3	515	25	15	0	028282		00	85	15	200									
	190		085	5	0031		18	399	3	5146	25	15						15	200									
	190		085	5	0049		19	902	3	5148	25	15						15	204									
			ST	ΓD	0050		19	902	3	515	25	15	0	028420)	01	41	15	204									
			ST	ΓD	0075		19	900	3	515	25	15	0	028456	,	02	13		208									
	190		085	5	0075		19	900	3	5148	25	15							208									
	190		085	5	0098		1.8	395	3	5147		516							210									
			51	TD	0100		18	395	3	515		517		028429		02			210									
			51	ΓD	0125			888		513		517	0	028480)	03	55		212									
	190		085	5	0145		18	383	3	55118		517							214									
			57		0150			356		506		20		02830		04			206									
			51		0200			579		3455		547	0	02581	1	05	62		126									
	190		085		0201			573		34546		548					=.		124									
			57		0250			225		3424		597	0	021053	5	06	/9		015									
	190		0B5		0293			007		34068		523		01071		07			942 937									
			57		0300			990		3406		526	U	01834	5	07	11		886									
	190		089		0396			313		34019		551	0	015994	1	00	149		887									
			51		0400			810		3402		551		014636			02		878									
				10	0500			742		3409		566 581		01330		12			868									
				TD	0600			574 505		3416 3423		596		01330			68		857									
				TD	0700			537		3430		710		01067			181		847									
				TD TD	0900			168		3437		723		00938			81		836									
				TD	1000			100		3444		736		00815			669		826									
	190		089		1000			100		34437		736	Ŭ	00010	,		, , ,		826									
	130			TD	1100			368		3446		741	0	00767	5	17	748		828									
				TD	1200			340		3449		746		00719			323		833									
				TD	1300			314		3451		750		00681			393		839									
				TO	1400			292		3454		755		00639			959		846									
				TO	1500			273		3456		758		00608			21		855									
	190		089		1540			266		34573		760							862									
	130		00.	-			0	- 50		,,,,	-																	

ERE	NCE	SHIP	-			EE	MARSDEN	STA	TION TIA	\E			ORIGINA	TOR'S		OEPTH	MAX	. 1	WAVE		VEA-	CLOUD			N00C
'E	10. NO.	3000	LATITUE			DRIFT	SOUARE		IGMTI		EAR	CRUI		ATION		TO NOTTOR	, OF	-	SERVATION	1 6	HER	COOES		S.	UMBER
,		V.1	2017	1/10	1/10	-	10° 1°		DAY HR				_		-		13 MFL	_	1 - 1 - 1	EA	-			-	
τlτ	079	KL	2817	14 1 .	14000 W		087 80				967	NO			<u>, '</u>	4609	15	36	5 5	- 1	X 1	6 5	1	- 1	0014
							-	TER		SPEED	BARO-		AIR TEM	WET	vis.	NO. 085.		ECIAL							
							COLOR		OIR.	OR FORCE	(mbs)		BULB	BULB	COOF	OEPTHS	OBZER	VATIONS							
								1	36	506	240	5	161	144	8	14									
	Γ.							-	1 -1							Ť				_					
	1	AESSENGR TIME 6	CAST NO.	CARO	OEPTH (m I	T °C	S	٠/	SIGM A	_t 1		MALY-X10	۸ ^E C	YN. M.		OCITY	02 ml/	PO4-P µg = ar/l	TOTA		NO2-N ug - 01/1	NO3-N vg = a1/l	\$1 O4-\$1 yg - 01/1	pН
	1	HR 1/10						+			-			-	X 103	-			70 511	1.4	-			20	
						_	1000		1.0	05.4	. !			.								i			ļ
		200		STI			1925		18	251		0.0	28609	5 (0000		203								
		101		085	000		1925		178	251		0.0	2062	, ,	0000		203								
		101		STI 085	001		1921 1921		18	2512		00	28534	+ (0029		203								
		101		STI			1915		17	251		0.0	28495	- (057		203								
				STI			1910		17	2515			2839		0086		203								
		101		085	003		1909		165	2514		00	, 2009.	1 (,000		203								
				STO			1905		15	2514		00	28483	3 (142		205								
		101		OBS	005		1905		151	2514							205								
				ST			1903		15	2515		0.0	2853	3 (214		208								
		101		035	007	6	1903	35	149	2519	5					15	209								
				ST	010	0	1894	35	14	2516	6	00	28462	2 (285	15	210								
		101		085	010	2	1893	35	140	2516	6					15	210								
				ST	012	5	1891	35	11	2515	5	0.0	28699	9 (356	15	213								
				STO	015	0	1838	35	01	2520	0	00	28230) (428	15	201								
		101		085	015		1824		982	2522							197								
				STL			1551		51	2550		00	125498	3 (1562		117								
		101		085	T020		1506		449	2555							103								
				ST			1258		25	259			21598		088		026								
				STL			1029		09	262		00	1877	7 (781		952								
		101		OBS	030		0996		067	2625							941								
				STI			0803		02	2652		00	15888	3 (1954		883								
		101		OBS	041		0785		014	2654					100		878								
				ST			0661		07	2676			13646		102		845								
		20-		STI			0556		14	269!	_	00	11869	9	229		820								
		101		035	061		0542		152	2698		0.0	1105		363		817								
				ST			0502		24	2709			10560		341		816								
		101		STO			0458		33	272		00	09454	4 .	441		816								
		101		OBS	T081		0450		341	272		0.0	0071		522		816								
				STI			0420	-	38	272			08718 08040		532		817								
		101		ST(085	T101		0382		432	273		00	00040		016		821								
		101		ST			0356		46	274		0.0	0753	1 1	694		825								
				STI			0330		50	2748			07003		766		831								
				STO			0306		53	2753			06568		834		838								
				STO			0286		55	2756			06249		898		846								
		101		085	146		0274		559	2758		0	- OL 7				852								

ENCE	SHIP				≅ MAE	RSDEN	STAT	IT NO	445			0.010.01				T								
ID,	CODE	LATITE	1DE	LONGITUDE	SDI	JARE	3101	IGMT		YEAR .	CRUISE	DRIGINA		-	DEPTH	DEPTH		WAVE SERVATIONS	WEA				NDDC	
NO.	1		1/10	17/10	Z 10°	1"	MD	DAY H	R,1/10	1	MO'		UMBER	- 1	BOTTOM	OF S'MPL			0.000	CODES			STATION	
1079	KL	3000	J VI	14000 W	123	00		06 0		967	NO 5			-	4572	15	_	HGT PER SI	^	TYPE A M	_	-+	NUMBER	
			·	,	'	WA	TER	T w	IND		-	AIR TEM			+) 1 2	1 10	02	2 5	X8	2 6			0015	
						COLOR	TRANS		SPEED	BARO- METER		DRY		VIS.	NO. 08S,	SPE	CIAL							
						CODE	(m)	DIR.	FORCE	(mbs)		ULB	BULB	CODE	DEPTHS	OBSERV	ZHOITA							
								25	505	230	1	67	144	7	14									
	MESSENGR	CAST	CARD					LL	T													_		
	TIME (T NO.	TYPE	DEPTH (m)	T	°C	S	٠/.,	SIGMA	N-T S	ANOM	VOLUM ALY-X10 ³	E DYN	∆ D. N. M.	SOL		D 2 m1/1	PD4-P	TOTAL-P	NO2-N	ND3-N	SI 04~	51	5
	HK 1/10	-	C 71	2000			-						X	103	VELD	CITY	,	yg - 01/1	μg - a1/(νg - σΙ/Ι	μg - αI/I	µg = a1		CC
	094	1 .	STI OBS			822	350		252		002	6962	2 00	00	15	172								+
	0 , 4	,	STI	0000		822	350	163	252	8					1	'		1				1	1	Į
	094		OBS	0010		822							00	27										
	, ,		STE			822																		
			STI			821							00	54										
	094		085	2031		820 820							00	81										
			STO			820																		
	094		OBS	0051		820							01	35										
			STE			810																		
	994		085	0076		810							02	03										
			ST			808																		
	794		085	0102		807							0.2	71										
			STJ			784																		
			STD	0150		759							03:											
	094		OBS	0155		754							040	05										
			STD	0200		379							05	1 -										
	094		OBS	0209	1:	320							05.	1 /										
			STD		1:	186							060	20										
	00.		STO)48							066											
	394		OBS	0310	1 (24																		
	094		STD			364							0.78	9.3										
	0.94		OBS	T0412		343								, ,										
			STD			663							087	71										
	094		STD OBS			15							093	8 8										
	.,,,,,		STD	T0618		95																		
			510	0700 0800		49							099	95										
	094		OBS	0816		05							105	0										
			STD	0900		199																		
			STD	1000		60							110											
	094		OBS	T1018		56							115	7										
			STO	1100		39																		
			STD	1200		19							121											
			STD	1300		99							126											
			STD	1400	02								132											
			STD	1500	02								138											
	094		OBS	T1520	02		3456	8	2760				143	4	1 / 0 /									
									2.00						1485	22								

RENCE	SHIP	LATITU	DE LO	MGITUDE BOUTIER	MAR			ION TIN		EAR	CRUISE	ORIGIN	ATOR	DN.	Ø É P T H	OFFI	1	WAVE SERVATION	45	WEA-	CLOUD		S	NOOC TATION	
NO.	COOL	•	1/10	1/10	10°	1*	MO C	AY HR.	1/10		NO.		UME		BOTTOA	S'MPL	'S DIR.	H GT PER	SEA	1400	TYPE AM		1	IUMBER	
1079	KL	3000	N 14	-000 W	123	00	04 (07 0	09 1	967	NOS	01	6		4572	1 1 5	04	2 2		X1	6 4			0016	
						WAT	ER	WI	NO	SAR	2	AIR TEA	AP. 7		NO.	T		' ' '	'				,	0 - 0 - 1	
						COLOR	TRANS.	OIR.	S#EED OR	METI	ER	ORY	WE		OBS.	COSCO	ECIAL VATIONS								
						COOE	lm)		FORCE	(mbi	s1 E	BULB	BUI	L8	OEPTHS	1									
								08	S10	22	0 1	189	18	33 8	14										
	MESSENGR TIME 0	CAST NO.	CARD	OEPTH (m)	т	°C	S	٠/	SIGMA	\ _T	SPECIFI	C VOLU	M E	₹ △ 0 DYN. M x 10 ³	. SO	OCITY	O2 ml/	PO ₄ -1		TA L-P 3 - 01/1	NO2-N µg - at/I	NO3-N yg - al/l	SI O4-Si µg - at/l	рН	5 0 0
													\neg												\forall
	•	' '	STD	08S 0000 STD 0010		868	35	10 '	252	0	002	2780	4	0000	1.5	186		1	1	1			,		1.
	009		085	0000	1	868	350	98	252	0					15	186									
			STD	0010	1	852	35	10	252	3	002	2747	6	0028	19	183									
	009		OBS			851		195	252						1 5	183									
			STD	0020		846	350		252		002	2740	6	0055	15	183									
			STD	0030		841	350		252		002	2730	Я	0082		183									
	009)	035	0031		840		880	252							183									
			STO	0050		842	350		252		002	2740	5	0137		186									
	009		OBS	0052		842		93	252							187									
			STO	0075		840	350		252		002	2745	1	0206		190									
	009		035	0077		840		89	252				_			190									
	200		STO	0100		843	350		252		002	2759	5	0275		195									
	009		OBS	0103		843		090	252				_	- 0		195									
			STD	0125		835	350		252			2761		0344		196									
	009		STO	0150		826	350		252		002	2761	5	0413		198									
	009		OBS STO	0156		824	345	052	252		000	1.01		0544		198									
	009		0BS	0200		517 458			255		002	2484	2	0544		106									
	009		STD	T0210 0250		297		404	256		00.		,	0//1		087									
			STD	0300		126	342		258			2212: 1994		0661		040									
	009		OBS	0311		093		144	260		001	1994	0	0766		987									
	009		STO	0400		887	340		261		001	1 / 0 7	0	0050		977									
	009		085	T0407		872		054	264		001	1687	8	0950		916									
	009		STD	0500		671	340		267		001	1400	5	1105		848									
			STD	0600		516	340		269			1221		1236		802									
	009		085	0617		496		023	269		001	1	-	12.70		797									
	,		STD	0700		447	34		270		001	1070	8	1351		792									
			STD	0800		401	342		272			944		1451		791									
	009		OBS	T0813		396		258	272							791									
			STO	0900		378	34:		273		000	851	8	1541		799									
			STD	1000		358	344		273			777		1623		808									
	009		OBS	T1023		353		435	274							810									
			STD	1100		338	340		274		000	735	7	1698		817									
			STD	1200		318	344	_	274			699		1770		825									
			STO	1300	0	299	345	51	275			0664		1838		834									
			STD	1400	0	280	345	54	275	5	000	628	9	1903	14	843									
			STD	1500	0	262	345	56	275	9	000)593	7	1964	14	853									
	009		OBS	1528	0	257	345	569	276	0					14	856									

	- 1																					
REFERENCI	ID. CODE LATITUDE LON		DNGITUDE E	MAR	SOEN ARE	STAT	ION T		YEAR	ORIGIN			DEPTH	M A	[WAVE	WEA-	CLOUD			NODC	
		•	1/10	NGITUDE 1/10	10"	11.		DAY		TEAK		OITAT		OT MOTTOR	OF	00	SERVATIONS	THER	CODES		S1	UMBER
31107	79 KL	2000				++							-		3 mrs		HGT PER SI	A	TYPE AM	1		0777028
JIJIO	1 JI KL	3000) 14 T	4000 W	123	00				1967	NO5 01		!	4206	1:	04	3 4	X6	66		1	0017
						WA.	_	V	SPEED	BARC			VIS.	NO.	SP	ECIAL						
						COLOR	TRANS.	DIR.	FORCE	METE (mbs		W E1	CODE	OBS. DEPTHS	OBSER	VATIONS						
							-	06	515	24		17		7.6								
		.		1			 	100	313	1 24	0 170	_		14								
	LIWE	CAST NO.	CARD	DEPTH (m)	T	℃	2	٠/	SIGM	T-A	SPECIFIC VOLU	M E	₹ Δ D DYN. M.		JND	O2 ml/l	PO4-P	TOTAL-P	NO2-N	NO ₃ -N	SI O4-Si	- 14
	HR 1/1	0	7.112				ļ.,_						X 10 ³	VELO	DCITY		μg - e1/1	µg = o1/I	110 - 61\]	µg - at/l	µg - a1/1	pН
		-		1					1													
		_	STD	0000		851	35		252		002736	8	0000		181	'	1				'	
	18	1	085	0000		851		102	252					15	181							
		~	STD	0010		843	35		252		002724	7	0027		180							
	18	1	085	0010		843		097	252						180							
			STD	0020		843	35		252		002733		0055		182							
	2.0	7	STD	0030		843	35		252		002737	3	0082		183							
	18 18		OBS	0030		843		089	252						183							
	10	1	OBS	0049		846		096	252						187							
	18	7	ST0 085	0050		846	35		252		002746	1	0137		188							
	10	1		0074		845		96	252						191							
	18	7	ST0 085	0075		845	35		252		002751	7	0206		191							
	10	,	STD	0100		838	350	095	252 252		0027/0	2			194							
			STO	0125		761	348		253		002748		274		193							
			STO	0150		654	341		254		002720		0410		173							
	18	7	OBS	0150		654		588	254		002031	7	3410		142							
	-		STD	0200		351	34		257		002341	6)534		049							
	18	7	085	0202		341		213	257		002341	0 '	1234		049							
			STO	0250		191	34		259		002086	а ,	0645		002							
			STO	0300		059	34		262		001889		744		963							
	18	7	085	0301		057		142	262		00100)	,	, , , ,		963							
			STD	0400	0	873	340	06	264		001665	9 (922		910							
	18	7	OBS	10402		869	340		264		-0.00				909							
			STD	0500	0	667	340		267		001401	7	075		847							
			STO	0600	0	522	340	00	268		001245		207		805							
	18	7	085	0604	0	517	34(002	268	9					803							
			STO	0700		465	34	12	270	4	001100	1	1325		799							
			STD	0800		412	342	23	271	. 8	000963	9	1428	14	795							
	18	7	085	10801		411	342		271	9				14	795							
			STD	0900		383	343		272	8	000872		520	148	801							
			STO	1000		357	344		273		000790	9	1603	148	808							
	18	7	OBS	T1008		355	344	+07	273	8				148	808							
			STO	1100		333	344	44	274	3	000744	7	680	148	815							
			STD	1200		312	344		274	7	0007044	+ :	752		823							
			STD	1300		293	345		275		000666	7	821	148	832							
			STO	1400		277	345		275		000631	3 :	886	148	842							
	18	1	085	T1498	0.	263	345	57	275	9				148	853							

TABLE II. Observed and interpolated oceanographic data for stations taken by USCGC PONT-CHARTRAIN at Ocean Station NOVEMBER, 2-19 May 1967, prepared from NODC Listing No. 31-1080 PW.

REFERENC	ID. SHIP LATITUDE LONGITUDE				1 -!							_	ORIGINA	L TOP'	: 1		MAX	.	WAVE	TWEA	CLOUD	T		
	ID. CODE LATITUDE LONG				FONGILIDE PAGE	SOU	ARE	SIAI	ION TI	IME	YEAR	CRU		TATIO	N	DEPTH	DEPTI	H OB	SERVATIONS	THER	CODES		5	TATION
ODE NO	i.	CODE	•	1/10	· 1/10 ° \(\bar{\pi}\)	10"	11"	MOI	JAY H	R,1/10		NO		UMBI		BOTTON	S'M PL		HGT PER SI	CODE	TYPE A AF	7	N	UMBER
31108	30	PW	3000	N	14000 W	123	00	05 (2 2	200	1967	NO	06 00	1		4206	14	34	3 4	X 5	6 6			0001
'	. '	1		'	' '		WAT	ER	V	VIND	BARG	. T	AIR TEN	4 P. °C		NO.	5 p	ECIAL						
							COLOR		OIR.	SPEED	METE	R	DRY	W E 1 BUL		OBS. DEPTHS		VATIONS						
							CODE	(m)	_	FORCE		\rightarrow	BULB				-							
									36	511	26	1	189	16	1 8	14			Ļ	,		1	T	4
		MESSENGE		CARD		T	°C		1/44	SIG	T~AN	SPEC	IFIC VOLUA	M.E	₹ △ D OYN. M.		סאט	O ₂ mi/	PO4~P	TOTAL-P		NO3-N	5104-5	рН
		TIME HR 1/10	ND.	TYPE	5 2 1 1 1 1 1 1 1	'	-					ANI	OMALY-X10		X 10 ³	VEL	OCITY		µg = at/1	μg - α1/1	μg ~ at/l	μg - α1/1	μg - 01/l	
						Ī																		1
	- '		'	ST	0000	' 1	855	35	07	25	20	00	2773	2	0000	15	182							
		200)	OBS			855		065	25	20					15	182							
		200)	OBS	0009		835		055		25						177							
				ST			834	35			25		2733		0028		177							
				ST			823	35			28	00	2711	1	0055		176							
		200)	OBS			817	_	055	25		0.0	2606	7	0082		175							
		200	1	ST			817 815	35	068	25 25		U	2696	1	0082		178							
		200	,	ST			815	35			31	0.0	02692	Я	0136		178							
		200)	OBS	0070		810		067	25			25072	_	0 2 3 0		180							
				ST			806	35			32	00	2685	7	0203		180							
		200)	085	0094	1	788	35	022	25	34					15	177							
				ST	D 0100	1	779	35	01	25	35	00	026661	0	0270	15	175							
				SŢ			740	34		25		00	2634	4	0336		167							
		200)	OBS			713		837	25							161							
			_	ST			654	34			44	0.0	02593	3	0401		143							
		200)	OBS			394		350		72	~ (2200	c	0523		063							
				ST ST			358 178	34			77)2289)2047		0632		998				•			
		200	า	085		_	077		142	_	17	00	J20411	O	0032		967							
		20.		ST			043	34			21	0.0	01879	4	0730		957							
		20	0	OBS			887		059		42						911							
				ST			824	34			51	00	01598	1	0904		892							
				ST	0 0500	0	619	34	02	26	77	00	01348	2	1051	14	827							
		200	C	OBS			536	_	996		86						803							
				ST			506	34			93		01198	-	1179		798							
				ST			448	34			0.8	00	01057	1	1291		793							
		20	0	OBS			431	-	185		13			2			792							
				ST			410	34			20		00947		1392		795							
		201	0	ST OBS			376		346		31	00	00861	כ	1482		800							
				57			354	34	_	_	36	0.0	00803	0	1565		806							
				ST			330	34			41		00754		1643		813							
				ST		C	310	34	46	27	46	00	00709	4	1716	14	822							
				ST	D 1300	0	294	34	49	27	51	00	00669	3	1785	14	832							
				ST	D 1400	0	280	34	53	27	55	0 (00630	4	1850	14	843							
		20	0	OBS	T1409	0	279	34	536	27	56					14	845							

REFERENCE	FI VID		- T	- 5	MARSOEN	STATION TH	ME		ORIG1N	ATOR'S		OEPTH	MAX.	0.00	WAVE ERVATIONS	WEA-	CLOUO			NOOC
CTRY IO.	COOE	LATITU		NGITUOE E	SQUARE	(GMT)		EAR	CRUISE S	TATION		TO BOTTOM	0.5	1	HGT PER SE	THER	TYPE AM		1 2	TATION
-	211	2050	1/10	1/10 =		05 03 1		967	N06 00		-	4206	16	34	3 4	X1	6 5			0002
31 1080	PW	2959	\N 12	+000 W	087 90 WA		INO		A ID TE				_		12141	1 ~ 1	, 013	1	1	0002
					COLOR		GEEG	BARO- METER	*	WET	VIS.	NO, OBS.	OBSERV	ATIONS						
					COOE	Im? UIK.	FORCE	(mbsi	BULB	BULB		DEPTHS								
								262	2 178	139	8	14								
	MESSENGS	R CAST	CARO		ĭ °c	F ./			SPECIFIC VOLU	ME S	Δο.	sou	GNU	O2 m1/1	PO 4~P	TOTAL-P	NO2-N	NO3-N	5104-5	рН
	HR 1/10	NO.	TYPE	OEPTH (m)	1 (5 %.	SIGMA	`-'	ANOMALY-XI	07 X	△ 0 N. M. (10 ³	VELO	DCITY	02 11171	μg = 01/1	μg = 01/1	µg - a1/1	µg = a1/1	yg = a1/	-
	1																			
	1	1	STO	0000	1830	3507	252	7 '	002709	3 0	000	15	174		1					
	19	5	085	0000	1830	35071	252	7					174							
			STD	0010	1826	3507	252		002704	0 0	027		175							
	19	5	OBS	0012	1825	35066	252						175							
			STD	0020	1825	3507	252		002707		054		176							
		_	STD	0030	1824	3506	252		002711	.5 0	081		178							
	19	5	OBS	0033	1824 1824	35062 3508	252 252		002705		135		178							
	19	E	STD OBS	0054	1824	35088	253		002103	- 0	1))		182							
	19	2	STD	0075	1824	3509	253		002709	4 0	203		185							
	19	5	OBS	0084	1819	35085	253		002.0	, ,	-05		185							
	1 7	,	STD	0100	1799	3504	253		002692	1 0	271		181							
	19	5	OBS	0111	1783	34998	253					15	178							
	-		STD	0125	1754	3498	253		002638	9 0	337	15	172							
			STD	0150	1703	3486	254	2	002615	7 0	403	15	159							
	19	5	085	0159	1684	34793	254	1					154							
			STD	0200	1337	3427	257		002284	8 0	525		045							
	19	5	OBS	T0204	1310	34230	258		002026				036							
			STD	0250	1169	3419	260		002038		634 731		995							
	19		STD OBS	0300 0305	1038	3415 34147	262 262		001848	39 0	101		952							
	19	5	STD	0400	0851	3405	264		(• 1639	3 0	905		902							
	19	5	OBS	T0406	0840	34045	264						899							
	1 7		SID	0500	0640	3405	267		001352	25 1	055		836							
			STD	0600	0492	3405	269		001172		181	14	793							
	19	5	OBS	0604	0487	34052	269	16					791							
			STD	0700	0440	3415	270		001047		292		789							
			STD	0800	0402	3424	272		000945	4 1	392		791							
	19	5	085	T0809	0399	34253	272						791							
			STD	0900	0379	3433	273		000860		482		799							
			STD	1000	0358	3441	273		000784	+ / 1	564		808							
	19	5	OBS	1025	0353	34422	274 274		000744	6 1	641		+810 +817							
			STD	1100 1200	0338	3444 3447	274		000744		713		825							
			STD	1300	0299	3450	275		000672		782		834							
			STD	1400	0280	3453	275		000636		848		843							
			STD	1500	0262	3455	275		000600		910		853							
	19	5	OBS	T1591	0246	34578	276				_		+862							

FEREN	CE	SHIP			H 5	MARSOI			ON TH				ORIGINA	TOR'S		DEPTH	MAX.		WAVE		WEA-	Crono			NODC	
	D.	COOE	LATITUO	0E LO	NGITUOE HE	SOUAR		0 O	MT)		YEAR	CRUIS		ATION	8	OT MOTTO	OF S'MPL"		SERVATION		CODE	CO OES			TATION	
110	180	DW	30000		+0000W				_		967	NO	-		- /	663	13	04	2 4	347	ХI	8 4			0003	
1110	000	PW	30000	014 1-	+00000#1 1	125	WATI	_	_	INO		_	AIR TEM		4	NO.			[2]41		I XI	0 4	i	ļ	0003	
						c	DLOR		OIR.	SPEED	METE		DRY	WET	VIS.	Q85.		CIAL								
						C	300	(m)	OIR.	FORCE	(mbs	1	BULB	BULB	l l	DEPTHS										
									04	\$15	27.	2	178	156	8	13										
	[MESSENGR		CARO					,			SPECIF	FIC VOLUM		Δ 0	sou	IND		PO4-P		OTA L-P	NO2-N	NO3-N	SI O4-5		5
		TIME 4	NO.	TYPE	DEPTH (m)	Τ *(,	·/	SIGM	A-1	ANO	W W FA-X10;	X X	N. M.	VELC		02 ml/	µg = a1/		g = a1/1	yg - a1/1	yg - a1/1	µg - a1/	pH	c
		1110														1				+	-					1
	- 1		1 1	STD	0000	18:	29	350	9	252	9	00	26939	0.0	000	15	174		ł	- 1		1			t	1 1
		202		085	0000	18		350		252		-	20,3,	•			174									
				STD	0010	18		350		253		00	26888	0.0	027		175									
		202		OBS	0011	18	24	350	86	253							175									
				STD	0020	18		350	9	253	30	00	26898	0.0	054	15	176									
		202	:	OBS	0029	18.		350		253							177									
				STD	0030	18		350		253		00	26929	00	081		178									
		202		OBS	0048	18.		350		252			27070		100		181									
				STD	0050	18		350		252 253			27078		135		181									
		202	,	STD	0075 0076	18 18		350		253		00	26950	0.	202		182 182									
		202		085	0070	17		350		253							179									
		202		STD	0100	17		350		253		0.0	26946	0.3	270		179									
				STD	0125	17		349		253			26868		337		175									
				STD	0150	17	-	349		253			26794	_	404		172									
		202	>	OBS	0150	17	43	349		253				_			172									
				STD	0200	13	93	343	4	257	71	00	23449	0:	530	15	064									
		202	!	OBS	T0202	13		343		257							060									
				STD	0250	12		342		259			20939		541		013									
		200		STD	0300	10		341		261		0.0	18999	0	740		968									
		202		OBS	0315	10		341		262		0.0	16559	0.0	918		956 904									
		202	,	085	0424	08		340		265		00	10009	0.	10		890									
		202	•	STD	0500	06		340		267		00	14006	. 10	071		845									
				STD	0600	05		340		269			12184		202		803									
		202	2	OBS	0633	04		340		269				_			794									
				STD	0700	04	47	341	2	270)6	00	10782	1	317	14	792									
				STD	0800	04	02	342	4	272	0	00	09454	. 14	418	14	791									
		202	2	OBS	T0823	03		342		272							791									
				STD	0900	03		343		273			08369		207		793									
				STD	1000	03		344		274			07595		587		799									
				STD	1100	03		344		274			06971		660		807									
		200		STD	1200	03		345		275		00	06581	. 1	727		818									
		202	-	OBS	11274	02	95	345	19	275	3					14	829									

NCE 10.	SHIP	SQU	SOEN	(ION TIM	YE	AR	CRUISI	ORIGIN.	TATIO	ON	DEPTH TO SOTTO?	OF	H 08	WAVE SERVATIONS	- 00	IER .	CLOUG		S1	NODC TATION UMBER				
NO.			/10	1/10 =	10°	1°	MO 0	DAY HR.	1/10		NO.	h	UME	BER	\$01107	N S'MPL	°S DIR	HGT PER S	EA CO	/01	TYPE A M	1	. 14	OWBER	1
080	PW	29450	N 14	40000W	087	90	05 (05 00	08 19	967	NOE	00	4		4755	5 16	04	2 4	X	11	7 6			0004	
						WAT	ER	WIN		BARO		AIR TEA	AP. 7	C VIS.	NO.	SP	ECIAL								
						COLOR	TRANS.	OIR.	O.R	METER [mbs]		DRY	911	T COD	DEPTHS	OBSES	VATIONS								
						COUE	(17.7	1 1	FDRCE		-			_		-									
						ļ		L		281		172	1,	44 8	14	L.,				-	_				
	MESSENGR TIME	CAST NO.	CARD	DEPTH (m)	1	°C	5	-/	SIGMA	_T	SPECIFI	C VOLU	M.E	Z ∆ O		DNU	O2 m1/	PO4-P	TOTAL		NO2-N	NO3-N	SI O 4-Si	ρН	
	HR 1/10	I NO.	TYPE								ANUN	MALT-211	,	X 10 ³	VEI	LOCITY		yg - at/1	99 - D	3/1 3	ıg - a1/l	µg - a1/1	μg - ot/l		
								i																	
			STO	0000		827	350	09	2529	9	002	2691	3	0000	15	5174									
	0.08	1	085	0000	1	827	350	086	2529	9					15	174									
			STD	0010	1	825	350	08	2529	9	002	2693	4	0027	1.5	5175									
	300	3	OBS	0011		825		082	2529	9					15	5175									
			STD	0020		.824	350		2529			2697	-	0054		5176									
			STD	0030		823	350		2529		002	2701	7	0081		177									
	008	3	OBS	0031		823		072	2529							178									
			STD	0050		826	350		2528		002	2712	8	0135		182									
	008	3	OBS	0051		826		076	2528				_			5182									
	000	,	STD	0075		824	350		2529		004	2716	7	0203		185									
	008	5	OBS STD	0078 0100		823	350	076	2529 2530		00'	2711	~7	0271		5185									
	008	1	085	0100		810		051	2530		002	2711	f	02/1		5185									
	000)	STD	0125		741	34		2537		00:	2659	4	0338		5167									
			STD	0150	-	661	34		2542			2614		0404		5145									
	008	1	OBS	0150		661		732	2542		002	2014	0	0 - 0 -		5145									
			STO	0200		394	34		2564		002	2412	6	0529		063									
	008	;	OBS	0202		2930			2583				_	0 - 2 -		003									
			STD	0250	1	178	34		2602		002	2055	0	0641	14	4998									
			STD	0300	1	013	34	14	2628	В	001	1814	0	0738		4947									
	008	3	OBS	0302	1	007	34	134	2628	В						4945									
			STD	0400	0	844	340	03	264		00	1643	3	0911		4899									
	006	!	OBS	T0412	0	824	340	023	2649	9					14	4893									
			STD	0500		644	34		2679			1372		1062		4838									
			STD	0600		498	34		2693		00	1193	2	1190	14	4795									
	008	3	OBS	0614		483		035	2699							4791									
			STD	0700		1443	34		2706			1073		1303		+790									
			STD	0800		1405	34.		2718	-	000	971	2	1405		4792									
	008	3	OBS	T0824		397		228	2720	_						+793									
			STD	0900		380	34:		2727			0883	-	1498		4799									
			STD	1000		358	34:		2736		000	0806	9	1583		808									
	008	3	OBS	T1033		351		408	2739							4811									
			STO	1100		337	34		2741			756		1661		816									
			STD	1200		318	34	-	2745			721		1735		4825									
			STO	1300		299	344		2749			0686		1805		+834									
			STD	1400 1500		282	345		2753 2756			0654		1872 1936		4844									
	00-		OBS	T1620		248		561	2760	-	000	0621	7	1936		4854 4867									
	008																								

EFEREN	CE				_	≝ M	ARSDEN	STAT	ION TI	ME		ORIGIN	VATOR'S		DEPTH	MAX		WAVE	WEA-	CLOUD			NODC
rry 10	э.	CODE	LATITU	OE L	ONGITUDE	7	SOUARE		(GMT)	Y	EAR	CRUISE	STATION	1	OT MOTTOR	OF		SERVATIONS	THER	CODES			UMBER
DE N	0.			1/10	1/10	2 10	0" }"	MO	DAY H	R.1/10		NO.	NUWBE	R		Z,WbF.	S DIR	HGT PER SE	A	TYPE AM	7		
3110	80	PW	2830	N 1	4000 W	0.1	87 80	05	06 1	98 1	967	N06 00)5	4	4638	19	04	2 4	X 2	6 8	1	-	0005
							W	ATER	W	ONI	BARO	_ AIR TE	MP. °C	vis.	NO.	591	CIAL						
							COLO	R TRANS	DIR.	SPEED	METER		WET BULB	CODE	OBS. DEPTHS		ATIONS						
							200	E (m)		FORCE	(mbs)	-	-	+									
										<u></u>		178	16	7 8	13	<u> </u>						,	
		MESSENGI	CAST	CARD			T °C		٠/			SPECIFIC VOL	UME	₹ ∆ D JYN. M.	sou	JNO	O2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	5104-51	
	- 1	HR 1/10	9 NO.	TYPE	DEPTH (m)	'	1 6	1 ,	'e e	SIGMA		ANOMALY-1	107)	X 103	VELC	DCITY	02 11171	yg + ot/1	µg = a1/1	1/10 · gu	µg - at/1	µg = 01/1	ρH
	ŀ	HK 1710				_		-		1													
	J		1	STD	0000	- 1	1981	35	21	249	0	002972	20 1	0000	15	219				1		1	
		19	0	085	0000		1981		214	249		002718	20	0000		219							
		13.	0	510			1980			250		00297	3.8	0030		220							
		19	8	085	0014		1979		214	250		00277.				220							
		19		510			1979			250		00297	36	0059		221							
				STO			1978			250		00297		0089		223							
		19	8	085	0039		1977		212	250						224							
			_	STD			1946		19	250		002920	09	0148		217							
		19	8	085	0065		1906	35	164	251					15	208							
				STD	0075		1896	35	15	251	6	002836	50	0220	15	206							
				STD	0100		1854	35	07	252	1	00280	10	0291	15	198							
				STD	0125		1789	34	96	252	9	002734	49	0360	15	182							
		19	8	OBS	0127		1783		952	253	0					180							
				STD			1694		77	253		00266	16	0427		155							
		19	8	085	0190		1514		487	255						103							
				STD			1450		41	256		00240		0554		083							
				STD			1181	-	12	259		00211	18	0667		998							
		19	8	085	T0254		1163		098	259						992							
				STO			1044		07	261		00191	79	0768		957							
		19	8	085	0381		0862		040	264		00160	7.0	0944		903							
				STO			0824		04	265		00160	-	-		891							
				STD			065		03	267		00139	02	1094		843							
		19	8	OBS STD	70508 0600		0646		027 14	267 269		00120	62	1224		840							
				STO			0504		24	270		00105		1337		817							
		19	R	085	0768		0466		301	271		00100	0.0	1		813							
		1.9	U	STO			0454		32	272		00094	79	1437		814							
				STO			0419		38	273		00087		1528		817							
				STO			0388		43	273		00080		1612		821							
		19	8	085	T1019		0382		442	273						822							
				STO			0361		47	274		00075		1690	14	827							
				STD	1200		0337	34	50	274	7	00070	85	1763	14	834							
		19	8	OBS	T1264		0323		521	275						839							
				STO			0315		53	275		00066		1832		842							
				STO			0295		55	275		00063		1897		850							
				STD			027		57	275		00060		1959		859							
				STD			0231		60	276		00055	05	2103		885							
		19	8	085	T1909		0220	34	606	276	6				14	905							

REFERENCE SHIP LATITUDE LONGITUDE CODE 1/10 LONGITUDE CODE CODE LONGITUDE CODE CODE LONGITUDE CODE COD	NODC 517 (TON NUMBER 0006
CODE NO. CODE NO. CODE NO. CODE NO. CODE NO. NO. CODE NO.	0006
31 1080 PW 2832 N 140100W 87 80 05 07 193 1967 NO6 006 4755 15 03 3 X1 6 6 WATER WIND COLOR TRANS. DR. SPECIAL DRY OF SPECIAL DRY OBSERVATIONS	S1 O ₄ -S1
WATER WIND SPECIAL COLOR TEAMS DIR. SPECIAL DIR. SPECIAL DIR. SPECIAL DIR. SPECIAL DIR. DIR. SPECIAL DIR.	S1 O ₄ -S1
COLOR TAME CORE	
No. STD OOO	
MESSENCE CAST CARD TYPE DEPTH (m) T 'C 5 '/. SIGMA-T STECIFIC VOLUME NO. ANOMALY-X10 ² NO. NO.	
STD OOO0 1940 3522 2510 O028676 OOO0 15207	
STD 0000 1940 3522 2510 0028676 0000 15207 193 085 0000 1940 35219 2510 15207 STO 0010 1935 3522 2512 0028595 0029 15208 193 085 0010 1935 35218 2512 15208 STD 0020 1926 3520 2513 0028539 0057 15206 STD 0030 1908 3517 2515 0028352 0086 15203 193 085 0032 1903 35168 2516 15202 STD 0050 1845 3508 2524 0027532 0142 15187	
193	1
193	
STO 0010 1935 3522 2512 0028595 0029 15208 193 085 0010 1935 35218 2512 15208 STD 0020 1926 3520 2513 0028539 0057 15206 STD 0030 1908 3517 0028352 0086 15203 193 085 0032 1903 35168 2516 STD 0050 1845 3508 2524 0027532 0142 15187	
193 OBS 0010 1935 35218 2512 15208 STD 0020 1926 3520 2513 0028539 0057 15206 STD 0030 1908 3517 0028352 0086 15203 193 OBS 0032 1903 35168 2516 15202 STD 0050 1845 3508 2524 0027532 0142 15187	
STD 0020 1926 3520 2513 0028539 0057 15206 STO 0030 1908 3517 2515 0028352 0086 15203 193 085 0032 1903 35168 2516 15202 STD 0050 1845 3508 2524 0027532 0142 15187	
193 085 0032 1903 35168 2516 15202 STD 0050 1845 3508 2524 0027532 0142 15187	
STD 0050 1845 3508 2524 0027532 0142 15187	
35107	
193 065 0000 1640 00000 2024	
STD 0075 1838 3508 2526 0027471 0210 15189	
193 OBS 0077 35076	
193 OBS 0098 1827 35085 2529 15190	
STD 0100 1826 3508 2529 0027245 0279 15190	
STD 0125 1808 3505 2531 0027153 0347 15188 193 085 0148 1792 35019 2532 15187	
193 OBS 0148 1792 35019 2532 15187 STD 0150 1780 3499 2533 0027002 0414 15184	
193 085 70196 1518 34481 2555 15105	
STD 0200 1496 3446 2558 0024692 0544 15099	
ŠTO 0250 1257 342 7 2593 0021433 0659 15026	
193 OBS 0290 1106 34159 2613 14979	
STD 0300 1081 3414 2616 0019302 0761 14971	
193 OBS T0383 0892 34056 2641 14915 STD 0400 0856 3406 2647 0016425 0939 14904	
STD 0400 0856 3406 2647 0016425 0939 14904 STD 0500 0678 3406 2673 0013961 1091 14851	
193 OBS 0567 0588 34060 2685 14827	
STO 0600 0561 3410 2691 0012229 1222 14822	
STD 0700 0490 3420 2707 0010708 1337 14811	
193 OBS T0751 0461 34252 2715 14808 STD 0800 0442 3429 2720 0009556 1438 14808	
310 0000 0442 3727 2720 1772	
1/012	
193 OBS T0942 0394 34394 2733 14813 STD 1000 0377 3443 2738 0007922 1612 14816	
SID 1100 0350 3448 2744 0007312 1688 14822	
STD 1200 0327 3451 2749 0006894 1759 14830	
STD 1300 0309 3453 2752 0006603 1827 14839	
STD 1400 0294 3454 2755 0006417 1892 14850	
193 OBS T1463 0287 34544 2755 14857	

																7-		-		-	-		
FER	ID.	SHIP	LATITUDE	LO	INGITUDE		MARSDEN	STATION TI	ME YEAR	CRUI	ORIGIN:	TATION		DEPTH	DEPTH		WAVE SERVATION	15	WEA- THER	CLOUD		51	NODC
3 E	NO.	CODE		/10	1/10	· = -		MO DAY H		NO	0, 0	UMBER	8	MOTTO	S'MPL	S DIR.	THIGHT PER	SEA	CODE	TYPE AMI	1		UMBER
1	1080	PW		_	+000 w	-			87 1967	NO	06 00	7	1	755	14	0.8	2 4		X 1	8 2			0007
- -			2000		, , ,	10	WA		IND	1	AIR TEA			NO.			2 4	- 1	V 1	1 0 2	1	ı	0007
							COLOR	-	SPEED MARY		DRY	WET	VIS.	OBS.		CIAL							
							COOE	tm1 D1K.	OR (mbs	(1	BULR	8UL8		DEPTHS	0.000								
								03	512 24	0	211	167	8	14									
		MESSENGR	1240	CARD						SPEC	IFIC VOLU	s \	Δ O. M.	SOL	DND		PO 4-1		TAL-P	NO2-N	NO3-N	5104-51	
		HR 1/10	NO.	TYPE	DEPTH (m	1	ı "c	s */	SIGMA-T	ANI	OMALY-X1	DY	10 ³		CITY	02 ml/	μg - 01,		- 01/1	νο - αI/I	µg - 01/1	µg + al/l	pН
		P1K 1210				-				-				-			+	+					
				STO	0000	- 1	1889	3516	2519	١	2788	1 00	00	1.5	192			-	- 1			1	
		187	7	OBS	0000		1889	35157	2519	00	12100	1 00	,00		192								
		187		085	0009		1888	35157	2519						193								
				STD	0010		1888	3516	2519	0.0	2789	1 00	28		194								
				STD	0020		1885	3516	2520	0.0	2784		56	15	194								
		187	7	085	0029		1884	35158	2520					15	196								
				STD	0030		1884	3516	2520	0.0	2786	1 00	84	15	196								
		187	1	OBS	0048		1888	35158	2519						200								
				STD	0050		1888	3515	2519	0.0	2807	2 0.	40	15.	200								
		187	7	OBS	0073			3501P				_											
		100		SID	0075		1884	3509	2515	0.0	12849	4 0	10	15.	202								
		187	ſ	085	0097		1880	3507P	2514P	0.0	2000			1.	0.01								
				STO	0100 0125		1870 1776	3500 3488	2512)2890)2762		82		201								
		187	7	085	0148		1677	34748	2526 2539	00	12162	5 0.	23		177 150								
		10	1	STD	0150		1666	3473	2541	0.0	2627	4 04	20		147								
				STO	0200		1412	3436	2568		2371		45		070								
		187	,	085	10200		1412	34356	2568						070								
				STO	0250		1182	3416	2599	0.0	02084	3 00	56	14	999								
		187	7	085	0295		1025	34047	2619						949								
				STD	0300		1015	3405	2620	0.0	01886	5 0	56		946								
		187	7	085	T0390		0853	34035	2646						901								
				STO	0400		0833	3404	2649		1619		31		895								
		187	,	ST0 08S	0500 0580		0664 0566	3406 34101	2675	00)1376	1 10	81		846								
		10	1	510	0600		0554	34101	2691 2694	0.0	1199	2 1	209		820 819								
				510	0700		0499	3421	2707		01074		323		814								
		187	7	085	T0764		0468	34264	2715	00	71014	J 1.	2)		813								
				STD	0800		0453	3429	2719	0.0	00968	9 14	25		813								
				STD	0900		0415	3437	2729		00873		17		815								
		187	7	OBS	T0948		0398	34400	2733						816								
				STD	1000		0381	3442	2736	0.0	80800	0 1	01	14	818								
				STD	1100		0352	3445	2742	0.0	00759	4 1	80	14	823								
				STD	1200		0328	3447	2746		00717		754		830								
				STD	1300		0308	3450	2750	0.0	00678		323	14	838								
				STD	1400		0293	3453	2754	0.0	00644	9 1	390		849								
		187	7	OBS	T1442		0288	34546	2756					14	854								

REFERI		SHIP LATITUDE LONGITUDE				MARSDEN	STATION TI	ME	ORIGINA		DEPTH OF	AX. PTH OE	WAVE SERVATIONS	WEA	CLOUG			NODC
CTRY	NO.	CODE	*	1/10	1/10		MO DAY H			UMBER	100000	PL'S DIR.	HGT PERT SE	CODE			N	UMBER
211	000	201	3017													1		
211	080	PW	2957	N I	4002 W			000 1967			4105	15 2	2	X 2	6 8			8000
						WA		SPEED MART		VIS.	NO.	SPECIAL						
						COLOR	TRANS. OIR.	OR (mb		WET CODE	DEPTHS OBS	ERVATIONS						
							25	TORGE.			2.6		-					
			1				35	508 24	0 172	150 8	14							
		MESSENGI		CARD	OEPIH (m)	T °C	s */	SIGMA-T	SPECIFIC VOLUM	E SAO	SOUND	O2 ml/	PO4-P	TOTAL-P	NO ₂ -N	NO3-N	SI 04-SI	- 11
		HR 1/10		TYPE			' ''	3.000.77	ANOMALY-X10	x 10 ³	VELOCITY		μg = 01/I	μg = α1/3	µg = a1/1	µg - 01/1	1\1a - gu	pН
												1						
		1	,	STD	0000	1728	3469	2523	0027523	3 0000	1514	; ገ	1. 1		1			
		00	0	085	0000	1728	34686	2523	002152	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1514							
				STD	0010	1722	3470	2525	0027353	0027	1514	-						
		00	0	085	0010	1722	34695	2525		-	1514							
				STO	0020	1722	3471	2526	0027276	0055	1514							
				STD	0030	1722	3473	2527	0027147		1514							
		00	0	OBS	0030	1722	34732	2527			1514	4						
			_	STO	0050	1727	3476	2528	0027129	0136	1514							
		00	0	OBS	0050	1727	34759	2528			1514							
				STD	0075	1729	3477	2529	0027153	0204	1515	4						
		00	0	OBS	0075		34773											
			_	STD	0100	1731	3479	2530	0027170	0272	1515							
		00	0	085	0100	1731	34788	2530			1515							
				STD	0125	1553	3469	2563	0024008		1510							
		00	0	STD	0150	1400	3460	2590	0021554	0393	1506							
		00	U	OBS STD	0152 0200	1389 1271	34594 3442	2592 2602	0020475	0/:00	1505							
		00	0	OBS	T0204	1306P		2577P	0020475	0498	1502	+						
		00	•	STD	0250	1153	3428	2614	0019437	7 0598	1499	2						
				STO	0300	1040	3416	2625	001949		1495							
		0.0	0	OBS	0303	1033	34159	2626	0010445	, 0092	1495							
			-	STD	0400	0829	3404	2650	0016131	0865	1489							
		00	0	085	0401	0827	34038	2650	0010101		1489							
				STD	0500	0644	3404	2676	0013660	1014	1483							
				STO	0600	0512	3404	2692	0012096		1480							
		0.0	0	085	0602	0510	34035	2692		15	1480							
				STO	0700	0451	3416	2709	0010533	1256	1479							
		0.0	0	OBS	T0797	0406	34267	2722			1479							
				STD	0800	0405	3427	2722	0009267	1355	1479							
				STD	0900	0377	3435	2731	0008433	1444	14799	9						
		00	0	085	T0990	0354	34415	2739			14805	5						
				STD	1000	0352	3442	2740	0007704		14806	5						
				STD	1100	0329	3448	2747	0007068		14813							
				STD	1200	0308	3452	2752	0006599		14822							
				STO	1300	0290	3455	2756	0006234		1483							
		0.0	0	STD	1400	0275	3456	2758	0006047	1792	1484							
		0.0	U	OBS	T1498	0262	34563	2759			1485	3						

REFERENCE SHIP	701171		MARSOEN SQUARE	STATION TI			RIGINATO	R*5	OFFIH ,	MAX. OEPTH		WAVE		WEA-	CLOUG		T	100C	
CODE NO. COOE	1/10 LC	NGITUOE BOUTIONS		MO OAY H	YEA	R CRUISE	STAT		10	OF L		ERVATIO		THER	COGES			UMBER	
									,			HGT PER	SEA	 	TYPE A.M				
1 31/1000/ PW 300	9 N 14	4000 W	123 00 WAT		194 196		009 P TEMP.		4609	10	08			X1	6 1			0009	
			COLOR			ARO.		VIS,	NO. 085.	SPECIA	AL								
			CODE	IMI OIR.	08 1	NETER OR Imbs I BUL		JLB CODI	DEPTHS	DBSERVA	TIONS								
				06	508	290 17	8 1	33 8	13										
MESSENGR CAS	T CARO	Τ										Τ		1					T
TIME O NO	TYPE	OEPTH (m)	T C	5 %.	SIGMA-1	SPECIFIC Y	VOLUME LY-X107	₹ △ 0 0YN, M x 10 ³	. AEFOC ZONM		2 ml/l	PO4-		OTA L - P	NO2-N µg - a1/l	NO3-N yg - al/l	SI O4-Si ug - al/1	ρH	ò
FIX 1710		-	-	 	-			A 10	-			-	-			29 - 4.71			4
	STD	0000	1735	3473	2524	0027	300	0000	1514	. 3			1	- 1] [
194	085	0000	1735	34725	2524	0027.	277	0000	1514										
194	085	0008	1724	34718	252t				1514										
	SID	2010	1724	3472	2526	0027	210	0027	1514	i i									
	STO	0020	1724	3473	2527	0027		0055	1514	+ 3									
194	ORS	0025	1724	34734	2527				1514	+4									
-	STO	0030	1724	3474	2528	0027	135	0082	1514	+4									
194	OBS	0040	1724	34755	2529				1514	+6									
	510	0050	1719	3473	2528	0027	158	0136	1514	+6									
	STD	0075	1702	3469	2529	0027	142	0204	1514	45									
194	ORS	0085	1694	34683	2530				1514	44									
	STD	0100	1676	3469	2535	0026	636	0271	1514	41									
	STD	0125	1647	3473	2543	0.025	971	0337	1513	36									
194	OBS	0129		34705															
	STD	0150	1618	3469	2549	0025	50B	0401	1513										
194	OBS	0172	1592	34670	2553				1512	27									
	STD	0200	1425	3439	2568	0023		0524	1507										
	SID	0250	1197	3410	2592	0021	558	0637	1500										
194	OBS	0255	1179	34090	2594				1499										
	STO	0300	1075	3416	2619	0019	051	0739	1496										
194	088	T0324	1024	34187	2430				1495										
	STD	2400	0915	3411	2642	0016	954	0919	1492										
194	ORS	0486	0771	34044	2659				1488										
	STD	0500	0734	3404	2663	0014		1078	1487										
	STD	0600	0524	3399	2687	0012	593	1216	1480										
194	OBS	0630	0480	33973	2691				1479										
	STD	0700	0425	3403	2701	0011	192	1335	1478										
194	085	0764	0387	34088	2710		0 4 77		1477										
	STD	0800	0371	3413	2715	3039		1440	1477										
	STD	0900	0344	3426	2728	0008	124	1534	1478										
194	085	T0991	0344	34407	2739				1480	U I									

REFERENCE	SHIP	LATITUDE		IGITUDE EU	MARSOEN	STATION TIL	ME YEAR	ORIGINAT		DEPTH DEPT		WAVE SERVATIONS	WEA-	CLOUD		1	ATION
CODE NO.	CODE	1/10	LON	GITUDE SON		MO I DAY HI			MBER	BOTTOM S'MP		HGT PER SE		TYPE AMT			JASER
311080	D PW	30040N	1.6	0000W			96 1967	N06 010		-							
1 2111000	D PW	30040N	14	3000W[[WAT		IND	A ID TEASE	90	1			X2	6 8	1	1	0010
					COLOR	TRANS. DIR.	SPEED MET	0-	WET CODE	OBS. DOSE	PECIAL						
					CODE	lm)	FORCE (mb:	s) BULB	BULB	DEPTHS							
						11	512 29	0 183	167 8	13							
	MESSENG		ARD :			/		SPECIFIC VOLUME	₹ ∆ D OYN. M	SOUND	l	PO4-P	TOTAL-P	NO2-N	№03-М	\$104-51	
	# 1/10 HR 1/10	OF NO. TY	YPE	DEPTH (m)	1 10	s */	SIGMA-T	ANOMALY-X107	X 10 ³	. AEFOCITA	O2 ml/	μg = α1/1	µg = 01/1	μg - αt/I	μg - σ1/1	µg - o1/1	pН
	HK 1710				-				-								
	I		STD	0000	1731	3472	2525	0027322	0000	15141	1	1 1		· · · · · ·			
	19			0000	1731	34723	2525	002.322	0000	15141							
	-		STD	0010	1723	3472	2526	0027179	0027								
	19			0010	1723	34722	2526			15141							
			STD	0020	1721	3472	2527	0027189	0054								
			STD	0030	1720	3472	2527	0027185	0082								
	19			0035	1719	34718	2527			15143							
	10		STD	0050	1720	3472	2527	0027254	0136								
	19		5 T D	0056 0075	1720 1724	34719 3474	2527 2528	0027238	0204	15147 15152							
			STD	0100	1728	3478	2530	0027238	0272								
	20			0111	1730	34791	2530	002,101	0412	15160							
			STD	0125	1648	3472	2544	0025867	0339								
			STD	0150	1512	3458	2564	0024011	0401								
	20	2 OE	35	0167		34476											
			STD	0200	1286	3421	2583	0022299	0517	15027							
	20			T0221	1209	34096	2589			15003							
			STD	0250	1145	3412	2603	0020467	0624								
	20		STD	0300	1041 0976	3413	2622 2633	0018687	0721								
	20		5 T D	0334 0400	0865	34131 3406	2646	0016535	0898	14939 14907							
	20			T0446	0790	34030	2655	0010333	0090	14886							
			STD	0500	0688	3405	2671	0014188	1051								
		9	STD	0600	0538	3408	2692	0012093	1183								
	20			0665	0468	34100	2702			14794							
		5	STD	0700	0454	3414	2707	0010716	1297	14795							
			CTE	0800	0417	3426	2720	0009481	1398	14798							
	20			T0885	0390	34334	2729			14801							
			STD	0900	0386	3434	2730	0008611	1488								
			STD	1000	0360	3441	2738	0007870	1570								
	20			T1097	0337	34464	2744	0007333	1611	14816							
			STD	1100	0336	3447	2745	0007223	1646								
			STD TD	1200	0314 0294	3451	2750	0006742	1716								
			5 T D 5 T D	1300 1400	0294	3455 3457	2755 2759	0006281	1781 1842								
			STD	1500	0275	3458	2761	0005758	1901	-							
	20			T1655	0236	34587	2763	0000100	1701	14868							
		_	-0	, 1000	0230	54501	2105			* 7000							

REFERENCE	SHIP					-=	MARS		STAT	IDN T	1ME				DRIGIN	ATOR'S		DEPTH	DEP		WAVE	20.115	WEA				NDDC
CTRY ID.	CODE	LATIT				NDCT	sau.			GMT)		A 3Y	AR [CRUISE		TATIO		BOTTON	. 0	F	BSERVAT		CODI			N 2	MOITAT
CODE NO.	-		1/10	1	1/10	-	10"	1"	MO	HYAC	IR.1/10		-	NO.		NUMBE	К		S'ME	'L'S DIR	H GT PI	ER SEA	-	1 TYPE AN		_	
311080	PW	300	N C	14	000 W		123	00	05	13	194	19	67					4663	1	6 09	9	. 3	X2	6 8	}	1	0011
								WA"	TER	٧	VIND		BARD		AIR TE	MP. °C	_ vis	ND.	5	PECIAL							
								COLOR	TRANS.	DIR.	SPEEL	1	A ET ER (mbs)		DRY ULB	WET	COC		OREF	RVATION	S						
							- 1	COOL			FORC	-	_			_		1.7	-		-						
									1	10	\$12	2	29	1 1	78_	15		13	l			-		7	1		
	MESSEN TIMI	GF CAST		ARD	DEPTH (m)	T	°C	5	*/	\$10	MA-	т	SPECIFIC	VOLU	IAE	E A D	A. SO	UND	O ₂ ml		4-P		NO _Z -N	NO3-N	SI 04-SI	pН
	HR 1/	10 T NO.	1	YPE										ANUM	ALT-A		x 10 ³	AFL	DCITY		νg -	01/1	μg - στ/I	yg - 01/1	μg - et/l	μg = 01/l	
									1		1		- 1			1		- 1		1							
				STD	000	3	1	712	34	54	2 5	523		002	748	7	0000) 15	135								
	1	94	0	85	0000	0	1	712	3.4	541	2 9	523						1.5	135								
				STD	001	0	1	706	44	56	2 5	526		002	725	9	003.	7 15	135								
	1	94	01	85	001	0	1	706	34	558		526							135								
				SID	002	0	1	706	34	56	2 5	526		002			005		136								
				STD	0.03			705	34			526		0.02	730	15	008		138								
	1	94	0	BS	003			705		654		526							139								
				STD	005	0	1	709	34	59	2 !	527		002	721	7	013		143								
	1	94	0	35	005	5	1	710	34	695		528							144								
				STO	007			696	34			529			711		055		143								
				STD	010			679	34			531		002	699	3	027		141								
	1	34		B.S.	011			671		638		532							141								
				STD	012			584	34			546			374		033! 039!		0115								
	,			STD OC	015		i	443	3.4	42 330	2	567		002	214	. 5	009	7 1,	2012								
	À	94		95 STD	016		1	207	34		2 (590		002	154	G	051.	3 14	999								
	1	94		BS	T022			127		J18		598		002	1 2 7		C - 1.		973								
	T	7.4		SID	025			n63	34			510		001	970	16	061		955								
				STD	030			957	34			630			790		071		025								
	7	94		BS	033		-	895		57		641		001					907								
	1			STD	040			752	34			658		001	529	0.0	357		+863								
	1	94		85	T0-4			680		992		557							842								
	-			STD	250			608	34			680		001	323	4	101		823								
				STD	050			508	34			698			149		114	2 14	+800)							
	1	94		35	065			463	34	149		706						14	+792								
				STD	070	0	0	446	34	18	2	711		001	032	5	125	1 14	+792								
				STD	080	0	0	409	34	26	2	721		000	938	3.7	135	0 14	794								
	1	94	0	BS	088	2	0	383	34	322		729							+79E								
				STD	090	0	0	379	34	34		730			853		143		799								
				STO	100	0		357	34	-		738		000	783	36	152		+BJ8								
	1	94		BS	T109			337		461		744							815								
				STD	110			336	34			744			1727		159		816								
				STD	120			1316	34			748			695		166		825								
				SID	130			1297	34			752			1663		173		+834								
				STD	140			279	34			755			632		180		+843								
				5 T D	150			1262	34			758		000	601	. 1	106		+853								
	1	37	0	BS	T164	9	0	1739	34	585	2	763						14	4868	3							

REFERENCE	SHIP				MAR		STATION		T		DRIGINA	ATDR'S		DEPTH	MAX.		WA		WEA-	CLDUD			NODC	
CODE ND.	CDDE	LATITU	DE I	DNGITUDE	50U		MO DAY		YEAR	CRUISE ND.		TATION	1	TO BDTTDM	0.5	00		ATIONS	THER	TYPE AM			TATION	
311080	PW	3000		4000 W	123		05 14	197	1967	1				4572	17	-		2						
1 314000	1	3000	11 2	14000 #1	1127	WAT		WIND	8AR	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	AIR TEM		T	NO.			4	4	X5	6 6 5	1	- 1	0012	
						CDLDR	TRANS. DIR	SPEE	DMET	ER E	DRY ULB	WET SULS	CODE	OBS.		CIAL /ATIONS								
						CODE		FORG					+				-							
		1- 1					30	5 51	5 29	91 1	72	150	7	13			<u> </u>						_	
	MESSENGR TIME	CAST	CARD	DEPTH (m)	Т	°C	s °/	510	SMA-T	SPECIFIC	ALY-XIG	12 D	YN. M.		DOLLA	O2 m1/		O4-P	TOTAL-P	NO2-N	иоз-и	\$104-5		S C
	HR 1/10	1	11176					-					x 10 ³	V ELL	CIII		1 1	9 - 01/1	yg • a1/1	υg - αi/I	µg - o1/1	pg - 01/	-	c
					Ι,	-	0400	1			701	_		1			-							
	19	7	\$10 085	0000		741	3480 34796		528 528	002	701	9 (000		145									
	17	f	STE		_	741	3479		528	00.2	706	6 (027		147									
	19	7	085	0010		741	34794		528	002	,,,,,		2 1		147									
			ST	0020	1	740	3479		528	002	707	3 (054		148									
			STO	0030	1	739	3479	2	528	002	708	5 (081	15	149									
	19	7	085	0036	1	738	34793		528					15	150									
			ST		_	739	3479		528	002	716	6 (135		153									
	19	7	OBS	0056		740	3479	_	528	0.00	701		200		154									
			STO			738	3479 3480		528 529		721		203 271		157 160									
	19	7	085	0111		735	34796		529	002	123	4 (12 / 1		162									
	• • •	,	STI			644	3467		541	002	614	2 (338		135									
			STO			495	3447		559		445		401		090									
	19	7	085	0167			34348																	
		_	STO		_	246	3414		585	002	205	4 (518		012									
	19	/	085	T0223		154	34038		595	000					983									
			STO			089	3404 3405	_	607 627		818		623 719		965 932									
	19	7	085	0334		906	34060		639	001	010) (1117		912									
		•	ST			781	3401	_	655	001	563	7 0	888		875									
	19	7	085	T0444	0	708	33994	+ 2	664					14	853									
			STO	0500	0	627	3402	2	677	001	355	8 1	034	14	831									
	1.00		STO			511	3407		695	001	182	4]	161		801									
	19	1	085	0662		457	34120	_	705	001	024		2 7 4		790									
			STE			441	3417 3427		711 723		923		271 369		790 791									
	197	7	085	T0880		377	34342		731	000	723	۷ ،	707		795									
		•	STE			373	3436	_	733	000	831.	2 1	457		797									
			ST	1000	0	351	3442	2	740	000	769	2 1	537	14	805									
	19	7	085	T1094	0	332	34466	5 2	745					14	814									
			ST			331	3447		746		716		611		814									
			STE			312	3451		751		671		681		823									
			STI			294	3454		755		635		746		833									
			STE			277	3457 3458		758 761		599 579		808		843 853									
	19	7	085	T1652		240	34582		763	000	214	J 1	061		869									
	17		003	12072		270	34702		, 0)					14	007									

RENCE						SDEN		ION TIA	ΛE		Τ	ORIGIN	ATO	P*\$	DEPTH	MAX		WAVE	WEA	- CLOUD		1	10DC	
ID.	CODE	LATITUDE	FO	NGITUDE NO	201	JARE		(GMT)		YEAR	CRUIS		TAT		ID II	DEPTH	00	SERVATIONS	THE			ST	ATION	
NO.		1/	10	1/10 =	10°	1.	MD	DAY HR	.1/10		ND.	- !	4U W	\BER	BDITOA	S'MPL	S DIR.	HGT PER SI	A COD	TYPE A M	T	N	UMBER	
1080	PW	2833 N	14	001 W	087	80	05	16 0	64]	1967	NO	6 01	3		4846	15	15	2 4	X 3	6 5			0013	
			,		'	WAT	ER	_	IND	BARG		AIR TE	MP.		NO.	1]					0015	
						COLOR	TRANS.	DIR.	SPEED	METE	ER	DRY		YET COD	200		CIAL							
						CODE	(m)	J 174.1	FORCE	(mbs	s)	BULB	Bl	J L B	DEPIRE	<u> </u>								
								06	S05			183	1	56	13	1								
	MESSENGR		CARD	T .	T		T				CN CV	IC VOLU		₹ A D DYN. M	1.0	UND		PO4-P		P ND2-N				S
	time c	T ND.	TYPE	DEPTH (m)	1	0° 1	2	1/4.	SIGM	A-T	ANO	MALY-X1	0,7	X 103	· VEL	OCITY	O 2 m1/	µg = a1/1	101AL- µg - 01/		ND3~N µg = al/l	\$1 D4-\$1 yg - at/1	pН	C
	HR 1/10				-		-							A 10		-		+		-				+
							1				l				1.			1						
			STD	0000		944	35		251		00	2863	6	0000		209								
	064	+ C	BS	0000		944		238	251							209								
	06.		STD	0010		1944	35		251		00	2870	0	0029		210								
	064	+	BS	0010		1944	35	234	251		0.0	2856	7	0057		210								
	061								25]		00	2000	-	0057		210								
	064	•	BS	0029 0030		1926 1924	35	218	25]		0.0	2045	2	0000		208								
	064					1897		160	251		00	2845	3	0086		208								
	064	• 0	BS STO	0048		1897	35		251 251		0.0	2820	1	0145		202								
			STD	0075		1865	35		252			2782		0142		197								
	064		85	0097		1818		042			00	2102	1	0213										
	004	• •	STD	0100		1802	35		252 253		00	2706		0281		187								
			STO	0125		1676	34		254			2540		0347		147								
			STD	0150		1556	34		256			2407		0409		5112								
	064		BS	0152		1336		682	200	54	00	240 8	4	0409	, 1:)112								
	004	, -	SID	0200	7	1338	34		25	77	00	2286	А	0526	. 16	0.45								
	064		BS	T0201		334		266	257		00	2200		0-20		044								
		,	STD	0250		143	34		260		0.0	2028	4	0634		985								
	064		BS	0297		997		066	262				,	0 - 5		939								
	- 0 ,	,	STD	0300		991	34		262		0.0	1836	2	0730		938								
	064	• C	BS	T0395		810	_	028	265			1000	_	0.50		885								
			STD	0400		801	34		265		00	1578	5	0901		883								
			STD	0500		650	34		26			1349		1048		841								
	064	+ C	85	0589)553		116	269		- 0					817								
			STO	0600)547	34		269		00	1190	3	1175		816								
			STD	0700)497	34		270			1079		1288		813								
	064	+ C	BS	T0776		1462		264	271					2-00		812								
			STO	0800		1452	34		27		00	0975	1	1391		812								
			STO	0900		413	34	36	272			0878		1483		814								
	064	+ C	BS	T0964	(391	34	406	273	35					14	816								
			STD	1000	C	379	34	42	273		00	0804	9	1568	3 14	817								
			STO	1100	C	350	34	44	274	42	00	0757	8	1646	14	822								
			STO	1200	C	325	34	47	274	46	00	0715	1	1719	14	828								
			STD	1300		305	34		275		00	0677	7	1789	14	837								
			SID	1400		290	34		275		00	0645	8	1855	14	848								
	064	+ C	BS	T1460		283	34	545	275	56					14	855								

REFERENCE	SHIP			140	MARS		STATI	ON TH	ME				NATOR			DEPTH	MAX			VA VE RVA TIC	NI S	WEA-	CLOUD			NODC	
CTRY ID.	CODE	LATITUI	DE 1/10	LONGITUDE NON	10°		MD I D		0 1/10	YEAR	CRU		STATE			TO BOTTOM	OF S'MPL			GT PER		CODE	TYPE AM	-		NUMBER	
311080	PW	2959		14003 W	087			_	195	1967	NO	6 0	14			4650	15			3 2		X1	6 5			0014	
7 7 1 2 0 0 0	1 ' " [_,,,,		1,000		WAT			IND	BAR			EMP.			ND.				- 1-	1		, 0, 5	1	- 1	0017	
						COLOR	TRANS.	DIR,	SPEED	MET	ER	DRY	W	ET C	VIS.	OBS. OEPTHS	OBSER	ECIAL VATID	NS								
						CODE	ImI	0.4	FORC		5)	9019	BU	-	_												
								04	504			200	11		7	13											-
	MESSENGR	CAST NO.	CAR		т	°C	S	/	SIG	MA-T		IFIC VOL		₹ Z	i. M.	. VELC		02	m1/I	PO 4-		OTAL=9 ا/اہ - وبر	ND ₂ -N μg - at/l	NO ₃ -N μg - αt/l	\$1 O4-5		c
	HR 1/10				-		-		+					. X	103	1					+					+	H
	1						251	_	2.5			270	, - '	2		1 = 1				l				ı		1	
			ST			387	351			19	0.0	2790) 5	30	JC	15] 15]											
	195)	085			887 875	351 351			21	0.0	2770	36	00.	2 9	15]											
	105		ST OBS			875	351			21	0.0	1211	, .	00.	20	15											
	1		SI			326	349			15	0.0	2830	3.6	0.0	56	151											
	195	5	OBS			79)	347	-		14						15											
	_		ST			787	347			15	0.0	283	19	00	84	15	163										
	195	5	OBS		1	740	347	73	25	26						15	153										
			ST	D 0050	1	740	347			26		1273		01		15											
			SI			733	347			29	00	271	62	02	08	15											
	156		OBS			727	347			31		2/0		0 1	-	15											
			5 T			723 615	347			32) 269°) 2586		02		15: 15:											
			5 T 5 T			513	344			56		2470		04		15(
			ST			327	342			79		1226!		05		150											
	195	,	085			300	342			83						15/	33										
			ST			167	342			06	0.0	2020	0.3	06	31	140	994										
			5.1		1	029	341	6	26	27	00	162	62	07	27	140	153										
	1.01	ñ	088	0306	1	014	341	53	26	29						14	948										
			ST	D 0400	0	822	34)			51	ÜÜ	160.	25	08	98	14											
	100	5	035			805	347			53							886										
			5.7			637	34			76		1136		10			835 797										
	1.00	-	ST			504	340			92	01)120	50	1 1	10		794										
	19:		089			491 446	340			737	0.0	106	96	1.2	8.8		791										
			5 F			405	342			20		0094		_	89		79.										
	190		0B5			401	342			21		, ,		_			793										
			51			381	343			129	06	086	27	14	80	14	800										
			ST		0	359	344	1	27	38	0.0	078	59	10	62	14	809										
	195	5	089		0	356	344	14	27	39							809										
			51		0	338	344	4		42		0074			39		817										
			5.1			318	344			47		0070			12		825										
			5.1			299	345	-		51		0067	-	17			834										
			51			281	345			55		0063			46		844										
			51			265	345			759	90	0059	u 4	IA	08		854										
	191		OBS	5 T1517	0	262	345	064	21	750						14	856										

_																										
REFERENCE	SHIP					≝ MAR	SDEN		ION TI	ME			ORIGIN	ATOR'S		DEPTH	MAX		WAY		WEA-	Crond			NODC	
CTRY ID.	CODE	LATITU	1/10	LONGITUD	Dauff	10.	JARE 1	MOI	GMT)		YEAR	CRUIS NO.		TATION		BOTTON	0.6		BSERVA	PER SEA	THER	TYPE AM		2 4	TATION	
	Du	2057	-		- 10	10						+	1				_									
311080	PW	2957	>W	139553	w ;	086	99 WA			185	1967		AIR TE			4023	15	13	3 2 1	3	X2	6 8			0015	
							COLOR			SPEED	MET	U	DRY	WET	VIS.	NO, OBS,	92	ECIAL VATIONS	_							
							CODE	(m)	OIR,	FORCE			BULB	BULB	2001	DEPTHS	UBSEK	VAIION:	,							
									13	508	23	0	89	156	5 7	13										
	MESSENGR	CAST	CAR					Ì				CRECIE	C VOLU		ε Δ n	1 .0	סאטו				TOTAL-P	NO- N	NO N	5104~5	T	5
		of NO.	TYPE		'H (m)	Ī	°C	S	٠/	SIGA	T-AN	ANOA	AALY-XI	07	∑ ∆ 0 2 N. M X 10 ³	VEL	OCITY	O ₂ ml		04-P - 01/I	1/10 - gu	NO2-N NO2-N	NO3-N pg = at/l	101-01/	pΗ	C
	HK 1710	-										-			× .4	-				-					-	+
	1		S1	0.0	000	١ ،	871	35	1 2	25	2.1	1	2766	_	0000	1 1 5	187			1			1	I	1	11
	189	5	085		000		871		127	25		00.	2100	5 (3000		187									
	20.	,	ST		010		867	35		25		003	2761	8 (0028		187									
	189	5	083		10		867		125	25							187									
			S1		20		819	34		25			2748		0055		174									
		_	ST		30		780	34		25		00	2736	3 (0083		163									
	185	5	085		30		780		886	25				_			163									
	185	5	\$1 089		50		731	34	746	25 25		00.	2731	5 (0137		150									
	10.	,	ST		75		736	34		25		00	2718	2 (0205		150									
			ST		00		741	34		25			2705		0273		162									
	189	5	OBS		00		741	74	U -	2)	J I	00,	2,00	7 '	02 1)	,	102									
			ST		25		745	34	88	25	33	00	2690	0 1	0341	. 15	168									
			S1		50		749	34		25			2675		0408		174									
	185	5	089	0	152	1	749	34	928	25	36					15	174									
			ST		00		360	34		25		002	2352	1 (0533	15	052									
	185	5	OBS				340	34		25							045									
			ST		250		145	34		26			2032		0643		986									
	185	5	ST 0BS		300		984	34	076 076	26 26		00.	1810	0 (739		935									
	10.		ST		100		814	34		26		00	1586	8 (909		888									
	189	5	088				799		042	26							883									
			51	D 05	00	0	628	34	06	26		00	1329	8	1055		832									
			ST	-	00		495	34		26		00	1160	6	1179		794									
	185	5	OBS		10		485		75	26							792									
			ST		700)444	34		27			1030		1289		791									
	185		S1 085		00)407)402	34.	28 2 92	27		000	0921	6	1386		1794									
	10:		S1		900		379	34		27 27		0.00	838	2	1474		794 800									
			ST		000		355	34		27			773		1555		807									
	189	5	OBS				352		428	27			. , , ,				808									
			ST		00		333	34		27		000	732	1	1630		815									
			51	D 12	00	C	312	34	48	27			0694		1702		823									
			ST		300		294	34	51	27	52	000	0659	7	1769	14	832									
			ST		00		277	34		27			0625		1834		842									
			ST	_	000		263	34		27		000)594	2	1894		+853									
	185		085	715	19	C	260	34	568	27	60					14	855									

REFERENC	3 C	SHIP			-=	MARS		STAT	DN T	IME		Τ	ORIGIN	ATO	t*S	Т	DEPTH	MAX.	1	WAVE	WEA-	CLOUD			NODC	7
CTRY IC		CODE	LATITU		ONGITUDE PO	SQU.	ARE	1	GMTI		YEAR			STATE	ON	1.	TO	DEPTH	D8	SERVATIONS	THER	CODES			STATION	
CODE N	0.			1/10	1/10 ~	10°	1.	MD [AY H	18,1/10		1	١٥.	NUM	BER	80	MOTTO	S'MPL'S	DIR	HGT PER SE	CODE	TYPE AM	7		NUMBER	
3110	80	PW	2956	ON 1	.39580W	086	99	05	18	186	1967	· N	06 01	6		4	572	15	14	2 2	X 2	6 8			001/	
					' '	1	WAT		_	VINO		-	AIR TE		С	1			1 4	12121	1 ^2	1 0 1 0	1	1	0016	O
							COLDR	TRANS.	Die	SPEED	MET		DRY	W	VIII	S.	NO. 085.	SPEC	CIAL							
							CODE	tm1	DIR.	FORCE	lmb		BULB	BU	L8	10	SHTHS	DRZEKA	A IIDN 2							
									13	511	22	7	194	3	78 8	+	13									
	Г		1							911		-	1 74	1		_	101			L,						
	- 1	AESSENGR TIME 0	LCAST	CARD	DEPTH (m)	T	°C	5	٠/	SIGN	A-T		CIFIC VOLU		₹ △ DYN.	D	soul		O ₂ ml/	PD4~P	TOTAL-P	NO2-N	NO3-N	5104-	51	2
	,	HR 1/10		TYPE						1		^'	NOMALY-XI	10,	x 10 ³)	VELO	CITY		yg = a1/1	νg - α1/1	µ0 + al/	µg - al∕l	10 - Qu	/I pH	č
																										-++
			' '	STO	0000	1	785	348	3 3	25	20	۱	02776	6	000	0	151	150							1	+ !
		186		085	0000		785	348		25			02170		000	0	151									
				STO	0010		790	348		25		Λ	02782	0	002	Ω	151									
		186		OBS	0010		790	348		25			02,02		002	0	151									
				STO			752	347		25		٥	02759	0	005	_	151									
				STD			732	34		25			02741		008		151									
		186		OBS	0030		732	34		25		0	02141	~	008	2	_									
		2 0 0		STO			750	348		25		Ω	02727	0	013	0	151 151									
		186		OBS	0050		750	348		25		0	02121	7	015	0	151									
		100		STD			746	348		25		٥	02731	0	020	_	151									
		186		085	0099		733	347		25:		0	02101	0	020	0	151									
				STO			732	348		25:		0	02713	2	027	,										
				STD			705	347		25:			02703		034		151									
				STD			577	346								-	151									
		186		OBS	0151		676			25:		U	02693	8	040	9	151									
		100		STD			329	346		25:			0000	-	05.00	_	151									
		186		085	T0204		306	-		25		0	02327	1	053	5	150									
		100		STD			134	34]		25		0	0 20 1 0	_	04.	_	150									
				STO			984	341		260			02019		064		149									
		186		085						262		U	01802	6	073	9	149									
		100			0303		976	340	-	263							149									
		10/		STD			302	340		265		0	01587	3	0908	8	148									
		186		OBS	T0403		797	340		265							148									
				STD			519	340		261			01345		105		148									
		107		STO			491	340		269		0	01158	0	1180	0	147									
		186		OBS	0604		+87	340		269							147	-								
				STD			439	341		271		0	01031	6	1290	0	147	89								
		186		085	70798		+00	342		272							147	90								
				STO	0800		399	342		272	23	0	00918	2	1387	7	147	90								
				STD	0900	0 :	374	343	5	273	3.2	0	00838	3	1479	5	147	97								
		186		085	T0991		353	344		274	0						148	05								
				STD	1000		351	344	3	274	0	0	00763	3	1555	5	148	05								
				STO	1100	0.3	330	344		274	15	0	00725	7	1630	0	148	14								
				STO	1200	0:	310	344	8	274	9	0	00688	8	1700	0	148	22								
				STD	1300		293	345		275	52	0	00655	6	1768	3	148	32								
				STD	1400		277	345	4	275	6	0	00622	5	1831	1	148	42								
		186		085	T1496	02	264	345	65	275	9						148	53								

ENCE	SHIP	LATITUD	E LD	NGITUDE S	MAR		STATIC	ON TIME	YEAR	CRUIS	ORIGINA ST	TDR	3NL	DEPTH TO	MAX. DEPTH OF		WAVE SERVATIONS	WI	ER	CLDUD		S1	ATION	
NO.	CODE	•	1/10	· '1/10 ° Z	10*	1.	MD D	AY HR.T.	10	NO.		UMB		BOTTOM	S'MPL	S DIR.	HGT PER SE	A CO	DE	TYPE A MT	1	N	UMBER	
1080	PW	30030	ON 13	39590W	122	09	05 1	9 18 WIN			AIR TEM			4114	37	16	4 2	X	1	4 4	l	-	0017	
						COLOR			BA	TER	DRY	WE	VIS,	NO. OBS.	OBSER	CIAL VATIONS								
						CODE	Im I	F	DRCE (m	-	BULB	BUI		DEPTHS										
								17 S	15 2	17	200	19	94 8	18	L				_					
	MESSENGR TIME O HR 1/10	CAST NO.	CARD	DEPTH (m)	1	°C	\$.	·/	SIGMA-T	SPECIFI	C VOLUA	A E .7	₹ △ D DYN. M. x 10 ³		UND DCITY	D2 m1/	PO4-P ug - ot/t	10TAL		NO2-N ug - at/l	NO3-N µg - at/1	\$1 Q4-\$1 1/10 - 84	pН	SCC
	,		STD	0000		824	349		2519	00.	27874	4	0000		171									
	186		OBS	0000		824	349		2519						171									
	186		OBS	0009		817	349		2521	0.0	7770	,	0020		171									
			CT2	0010		814	349 348		2521 2522		2770: 27659		0028		170									
			STD	0030		764	348		2523		2761		0083		157									
	186		OBS	0033		758	347		2523				3003		156									
	200		STD	0050		734	347		2527	00	27282	2	0138		151									
	186		085	0051		733	347		2527					15	151									
			STD	0075		735	347		2528		2720		0206		155									
			STD	0100		.737	348		2530	00	2710	0	0274		161									
	186		085	0103		.737	348		2531	00	7/61/	_	03/1		161									
			STD	0125 0150		.654	346		2537 2548		26510 25530		0341		138									
	186		085	0154		527	344		2550	00.	27730	0	0706		101									
	100		STD	0200		280	341		2580	0.0	2255	1	0526		024									
	186		085	T0205		257	341		2583			_			017									
			STD	0250		119	341		2607	00	2003	4	0633	14	976									
			STD	0300	C	982	340	9	2629	0.0	1797	8	0728	14	935									
	186		035	0304		972	340		2631						932									
			STD	0400	C	777	340		2656	0.0	1549	0	0895	14	873									
	186		085	0403	,	7	340		2470	0.0	1222	^	1020	1.6	037									
	186		STD	0500 059 7)617)506	340		2679	00	1333	U	1039		827									
	100		STD	0600)504	340		2694	0.0	1188	6	1165		798									
			STD	0700)450	341		2708		1059		1278		793									
	186		OBS	T0789		0411	342		2719	- 0					793									
			STD	0800		407	342		2720	00	0943	8	1378	14	793									
			STD	0900		377	343		2731	00	0843	3	1467		799									
	186		085	T0978		357	344		2738						804									
			STD	1000		356	344		2739		0775		1548		807									
			STD	1100		352	344		2743		0748		1624		823									
			STD	1200 1300		344	345		2747		0716 0688	-	1698 1768		837									
			STD	1400		319	345		2753		0664		1835		860									
	186	,	085	T1462		309	345		2755	0.0		-			+867									
			STD	1500		298	345		2757	00	0630	7	1900		869									
			STD	1750	(236	346	0	2764	00	0548	1	2048		+884									
	205	5	OBS	T1866		215	346		2767						895									
			STD	2000		203	346		2769	00	0504	8	2179		+913									
	20 5	ò	085	T2404		174	346		2773				210		970									
	20-		STD	2500		0170	346		2774	00	0460	U	2420		+984									
	205)	OBS	12946		0156	346		2775	0.0	0449	1	2647		055									
	205		STD	3000 3438		0155	346		2776	00	0448	1	2647		139									
	205		0BS	13669		0150	346		2778						179									
	205	,	003	1 2009	,	0,1,0	246	302	2110						117									

TABLE III. Observed and interpolated oceanographic data for stations taken by USCGC WINONA at Ocean Station NOVEMBER, 15 June-1 July 1967, prepared from NODC Listing No. 31-1083 WI.

REFERENCE	SHIZ				E MAR	SOEN	STATION TI				RIGINA	ATOR'S		DEPTH	MAX. OEPTH		WAVE.	WEA	CLOUO	Т		400C	1
CTRY IO.	CODE	LATITU			15 5 L	JARE	(GMT)		YEAR	CRUISE NO.		TA TION		MOTTOR	OF		ERVATIONS	THER	CODES	1		UMBER	
		2050	1/10	1/10	10-	1	MO DAY H			-			`		S'MPL'S		HGT PER SE		TYPE A M	7			-
311083	AIAI	2959	N 1	4007 W	087				1967	NO 7				4389	15	04	3 2	X1	7 1			0001	
						WAT	ER W	INO	BARG	o	IR TEA	AP. °C	VIS.	NO.	SPEC	CIAL							
						COLOR	TRANS. OIR.	SPEED	M ET I		DRY ULB	WET	COD	OBS.	OBSERV	ATIONS							
						0001		FORCE	+					-	-	-							
							01	505	24	0 1	92	153	3 7	14	<u> </u>		,						
1	MESSENGR	CAST	CARO	OEPTH (_, ,	°C	s -/			SPECIFIC		ME :	E ∆ O N. MYC	soi	UND	0 1/1	PO4-P	TOTAL-P	NO2-N	NO3-N	\$1 O4~\$1		\$
	HR 1/10	Ť NO.	TYPE	Otrin i	m,		3 '44	SIGM	^A-I	ANOM.	ALY-XIC	17 "	x 10 ³	. VELO	DCITY	O2 m1/I	yg + a1/1	1/10 · gu	μg = o1/l	μg - σ1/i	1/1a - gu	ρН	C
	17.10	1					-					+					1						+
	1	1	STO	000	n :	2071	3528	248	e n	003	153	,	0000	15	244		1	l		I	1	1	1
	218	2	OBS	000		2071	35279	246		003	100	+ (,,,,,		244								
	210	,	STO			2031	3527	249		003	060	8 (0031		235								
	218	3	OBS	001		2031	35271	249		003	000	, (100		235								
			5 T C			2029	3527	249		003	060	0 (0062		236								
			STO			2027	3527	249			059		0092		237								
	218	3	OBS	003		2027	35269	249		000	4 2 2 2	•	,,,		237								
			STO			2027	3527	249		003	067	2 (0154		240								
	218	3	OBS	005		2027	35268	249							240								
			STO	007	5 1	1852	3506	25		002	795	0 (0227		193								
	218	3	OBS	007	6 1	1847	35053	252	21						192								
			STO	010	0 1	1793	3498	252		002	721	5 (0296		179								
	218	3	OBS	010	2 1	789	34972	253			_				178								
			STE	012	5 1	1759	3490	253	31	002	708	4 (364		172								
			STO	015	0]	687	3478	253	39	002	638	4 (0430	15	153								
	218	3	OBS	015	4	672	34753	254	41					15	149								
			STO	020	0 1	404	3435	25	70	002	359	8 (0555	15	068								
	218	3	OBS	T020	9]	358	34296	25	75					15	053								
			STO	025	0 1	192	3419	260	00	002	080	5 (0666	15	003								
			ST			1027	3410	262		001	867) C	765	14	951								
	218	3	OBS	031		1999	34086	262							943								
			STO			832	3404	264		001	617	5 (0939		894								
	218	3	OBS	T041		809	34032	265							888								
			STO			1639	3403	26			363		1088		836								
	21.		STO			1498	3403	269		001	196	2 :	1216		795								
	218	3	OBS	061		1482	34030	269							791								
			STE)435	3414	270			049.		1329		787								
	210		STO			394	3425	272		000	928	8 .	1428		788								
	218	3	OBS	T081		389	34263	272							788								
			ŜTO			374	3434	27:			847.		1516		797								
	218		STI OBS	100 T101)356)353	3441	273		000	782	4]	1598		807								
	218	,	STO			338	34420	27:		000	724		1 4 7 7		809								
			STE			320	3447 3451	274			724		1673		817								
			STO			301	3454	275			681.		1744		827								
			510			282	3456	275			643		1810 1873		836								
			STO			263	3456	275			596		1933		845								
	218	3	OBS	T152		258	34562	27		000	יסככ	•	1733										
	210	,	003	1132		, 2 , 0	34302	21:	77					14	856								

	I	-			_													MAX								
EREN		SHIP	LATITUD	E LO	NGITUDE	DRIFT	MAR	SDEN	TATZ	ION TIN		EAR	CRUI	DRIGIN	TATIE		DEPTH	DEPTH		WAVE ERVATIONS	Vi Ti	HER	CLOUD		S	NODC
	D. 10.	CODE		1/10	1/10	P N	10°	11.	MDI	DAY THE	1/10		NO		UME		BOTTOA	A SOMPL	S DIR.	HGT PER S	EA CI	300	TYPE A M	1	N	UMBER
h	83	WI	30032	N TA	0015W		123	00	06	16 1	87 1	967	NO	7 00	,		4773	15	49	ох	٠,	x 1	6 6			0002
L II C	,00	** 1	20022	.14 2-	,0012W	1 1	123	WAT		WI				AIR TE			NO.	1		10171		V T 1	0.0	'	'	0002
								COLDR	TRANS.	1	SPEED	BARO- METER		DRY	W E	T CODE	085.	OBCCO	VATIONS							
								CODE	(m)		OR FORCE	(mbs)		BULB	BUI	.8	DEPTHS									
										14	504	225	5	198	15	3 7	14									
	- 7	MESSENGR	7242	5430									SHECK	IC VOLU	M.E	₹△D	SE	UND		PO4-P	TOTA		NO2-N	NO3-N	SI 04-Si	
	- 1	FIRME 1	NO.	TYPE	DEPTH	(m)	1	°C	5	*/	SIGMA	T-4		MALY-XI		DYN. M x 103		OCITY	O3 m1/1	yg • a1/1	μg -		1/10 - gu	yg - at/t	μg = ot/l	pH
	P	HR 1/10					-		-			-			+		-		-	1		-				
				CED	000	0	١	1047	25	3.0	24.0	_	00	2077	١	0000	1	- 72/				- 1			l	1
		10-	,	STD	000			2042	35	288	248		00	3072	0	0000		236								
		187		STD	001			042	35		248		0.0	3052	5	0031		235								
		187	,	085	001			032		286	249		00	2022	,	0031		235								
		10		STD	002			.992	35		249		0.0	2981	3	0061		5225								
				STD	003			951	35		250			2915	-	0090		5215								
		187	7	OBS	003			951		205	250		00	2,1,	7	00,0		5215								
		10.		STD	005		_	866	35		252		0.0	2789	n	0147		5193								
		187	7	OBS	005			866		103	252		00	2,0,		0 - 4 1		5193								
		10		STD	007			811	34		252		0.0	2770	1	0217		5180								
		187	7	OBS	007			811		960	252				-			180								
				STO	010			751	34		253		00	2674	5	0285	1 !	5166								
		187	7	OBS	010	1	1	749	34	906	253	4					1.9	5165								
				STD	012	5	1	744	34	90	253	5	00	2673	6	0352	15	5168								
				STD	015	0	1	681	34	81	254	3	0.0	2603	1	0418	1 !	5152								
		187	7	OBS	015			673		794	254							5150								
				STO	020			356	34		257		00	2293	0	0540		051								
		187	7	OBS	020			318		257	258							5039								
				STD	025			167	34		260			2035		0648		4994								
				STD	030			021	34		262		0.0	1842	2	0745		4949								
		187	7	OBS STD	030			001		115	262		0.0	1677	2	0918	-	4943								
		187	7	085	040 T040			819	34	037	264 265		00	1622	~	0 7 1 0		4896 4891								
		10		STD	050			640	34		267		0.0	1359	1	1067		4836								
				STO	060			501	34		269			1190		1195		+796								
		187	7	OBS	061		-	490	-	042	269		00	1170	,	1 4 7 2		4794								
		10.		SID	070)445	34		270		0.0	1046	1	1307		+791								
				STD	080			406	34		272			0927		1406		793								
		187	7	OBS	T080			404		271	272		-		_			4793								
				STD	090			381	34		273		0.0	0855	3	1495		4800								
				STD	100		_	357	34		273			0783	-	1577		4808								
		187	7	OBS	T100			356		414	273		- 0		•			4808								
				STD	110			335		46	274		0.0	0728	5	1652		4816								
				STD	120			314	34	-	275			0674		1722		4824								
				STD	130		(295	34	54	275		00	0636	6	1788	1	4833								
				STO	140	0	C	277	34	56	275	8	00	0607	0	1850	1	4843								
				STD	150	0	(260	34	56	275	9	00	0592	9	1910	1	4852								
		18	7	OBS	T151	6	(257	34	564	276	0					1.	4854								

REFERENCE	SHIP	LATITUDE	LONGITUDE E	MARSDEN	STATION THE		ORIGINA	TOR'S	DEPTH DEPT		WAVE	WEA-				NDOC	
CODE ND.	CDDE	1/10	LONGITUDE	10" 1"	MO DAY HE	YEAR		MBER	DE STAP	: 003	ERVATIONS	THER	TYPE			UMBER	
311083	WI	30064N	140080W	123 00		86 1967			4633 1					1			
,	1	2000 1.1	1.0000			IND BAR	A ID TEAM		10		2 5	X1	6 6	1	1	0003	
				COLDI		SPEED MET	ER DRY	WET CODE	005	PECIAL							
				CDDE	-	FORCE (MD)		8UL8									
				<u>i</u>	29	503 21	0 172	163 7	14								
	MESSENGE TIME O	CAST CAR		7 %	s */	SIGMA-T	SPECIFIC VOLUM-	E SAD	SDUND	D2 ml/l	PO4-P	TOTAL-P	NO2-N	ND3-N	51 D4-5i	Нq	S
	HR 1/10	, 117	c				ANOMALI-XIO	X 10 ³	VELOCITY		μg - σ1/1	yg = a1/l	µg + a1/1	µg = at/l	yg - 61/1	pri	č
	186		0000	2061	3530	2485	0031133	0000	15241								
	100	- ,	5 0000 FD 0010	2061 2047	35299 3529	2485 2488	0030884	0031	15241 15239								
	186			2047	35289	2488	0030884	0031	15239								
			TD 0020	2015	3528	2496	0030167	0062	15232								
		S	TD 0030	1982	3527	2504	0029439	0091	15224								
	186	083	5 0030	1982	35272	2504			15224								
			TD 0050	1914	3510	2508	0029097	0150	15207								
	186			1914	35097	2508			15207								
	100	_	rD 0075	1821	3501	2524	0027597	0421	15183								
	186		5 0075 TD 0100	1821	35007	2524	002/025		15183								
	186			1765 1765	3493 34934	2533 2533	0026895	0289	15170 15170								
	100		0125	1720	3484	2536	0026620	0356	15170								
			0150	1635	3470	2546	0025801	0421	15137								
	186	083	0153	1622	34679	2547			15133								
			rD 0200	1323	3426	2579	0022648	0542	15040								
	186			1287	34219	2583			15028								
			0250	1163	3420	2606	0020204	0650	14993								
	186	S1 085		1035	3416	2626	0018364	0746	14955								
	100	Si		0836	34157 3404	2629 2649	0016237	0919	14949								
	186	085		0812	34034	2652	0010237	0719	14896								
		S1		0643	3403	2676	0013669	1068	14837								
		<u>5</u> 1		0504	3404	2693	0011998	1197	14798								
	186	0 B S		0490	34035	2694			14794								
		S1		0445	3415	2709	0010536	1309	14791								
	186	S1 0B3		0404	3426	2722	0009329	1409	14792								
	100	S1		0379	34266 3434	2722 2730	0000620	1400	14792								
		S1		0356	3441	2738	0008530	1498 1580	14799								
	186	0BS		0355	34413	2739	0001024	1,00	14808								
		S1	D 1100	0335	3447	2745	0007211	1655	14816								
		S1		0314	3451	2750	0006742	1725	14824								
		S1		0295	3454	2754	0006366	1790	14833								
	107	S1	_	0276	3456	2758	0006059	1852	14842								
	187	089	1496	0260	34560	2759			14851								

REFERENCE	SHIP			L E	MARS	OEN	STAT	ION TI	ME		ORIGIN	ATOR'	's	OEPTH	MAX		WAVE		WEA-	CLOUD			1000	
CODE NO.	COOS	LATITU	1/10 L	ONGITUDE SOUTH	10"		MOTO	GMTI	0.1415	YEAR		STATIC		MOTTO	OF S'M PL	1 00	HGT PER		THER	TYPE AMI			ATION UMBER	
		2050								1067	-						1	SEA.						
31108	3 W I	2959	YON [1	.40043W	087	90 WA1			VINO	1967	A ID TE			+846	15	05	3 6	- 1	X 2	6 8	1	- 1	0004	
							TRANS.	OTR.	SPEED	- BARO)-	WE	ZIV I	NO.		CIAL								l.
						CODE	Lm 1	OIK.	FORCE	[mbs	1 BULB	BUL		SHIA3O		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								
								28	503	21	0 197	16	6 7	14										
	MESSENG	CAST	CARO				Τ.	- /	Τ		SPECIFIC VOLU	IME	₹ △ D OYN. M.	sou	IND		104-1	101	A L—P	NO2-N	NO ₃ ~N	\$104-\$1		s
	HR 1/10	약 NO.	TYPE	OEPTH (m)	1	Č	\$	*/	SIGA	7-AA	ANOMALT-I		X 10 ³	VELO		02 ml/	yg - at		- at/[µg - at/1	μg = α1/I	μg - α1/l	pН	00
	1710		1		-				+			$\overline{}$		1				+-						+
	1	1	STO	0000	7	070	35	7 B	24	A 1	003149))	0000	1 15	243			1	- 1	,		'		1 1
	17	7	OBS	0000		070		281	24		00314;	, ¬	0000		243									
			STO			062	35		24		003133	33	0031		243									
	17	7	OBS	0010	2	062	35.	280	24	83					243									
			STO			053	35.		24	85	003115	3	0063	15	242									
			STO			044	35		24		003097	74	0094		241									
	17	7	OBS	0030		044		276	24						241									
		_	STO			887	35		25		002865	50	0153		199									
	17	1	OBS	0050		887 848	35	068	25	23	00277		072/		199									
	17	7	OBS	0075		848		072	25		002776	00	0224		192 192									
		'	STE			774	34		25		002703	3.2	0292		173									
	17	7	OBS	0100		774		944	25		002,0	_	0-72		173									
			STE			703	34		25		002649	50	0359		155									
			STO	0150	1	613	34	66	25	48	002560)6	0424	15	130									
	17	7	085	0152	1	605	34	644	25	48				15	127									
			STO			364	34		25		002316	52	0546		054									
	17	7	OBS	T0208		328	-	259	25						043									
			STE			165	34			03	002046		0655		993									
	1.7	-	STO			010	34			24	001845	8 0	0753		945									
	17	7	085	0305		997 835	34	086		26	00167	2.2	0926		941									
	17	7	OBS	T0405		826		04 037		49 50	001622	2 2	0726		896 893									
	11	,	STI			634	34			77	001354	8.4	1075		834									
			STO			492	34			94	001188		1202		793									
	17	7	085	0609		482		031		95	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				790									
			ST			436	34	15		09	001043	30	1314		788									
			ST	0800		397	34	26	27	22	000924	48	1412	14	789									
	17	7	085	0808		394		270		23					789									
			STO			372	34			32	000837		1500		797									
			STO			351	34			40	000769	92	1580		805									
	17	7	OBS	T1008		349		422		40	00072		1651		806									
			STO			331	34			44	000734		1656		814									
			STO			296	34 34			48	000699		1727 1796		823									
			ST			281	34			51	000636		1861		833									
			STO			268	34			58	000608		1923		855									
	17	7	OBS	T1522		265		558		59	300000	. 1	2,23		858									
	4.1	,	003	11722	0	200	7.4		2 1	,				1 7	0 00									

REFERENCE	SHIP		1	NGITUDE E	MARS	DEN	STATIC	STATION TIME		EAR	ORIGINATO					DEPTH	MAX.	0.0	WAVE OBSERVATIONS		WEA		LOUD			NODC	
CODE NO.	CODE	LATITUDE LO		NGITUDE B	10°		MO DAY HR.1/1			EAK	CRUI		STATION NUMBER		1	MOTTOE	DF S'MPL'	l .		PER SE	COD	c l	PE AMI			TATION UMBER	
311083	WI	30001N		0028W	123					967	NO	7 00	5		1	4361	15	1		3	X 1		6 7			0005	
, , , , , , , , , , , , , , , , , , , ,		WAT			ND	BARG	1	AIR TE				NO.] [121	1 \	. 1	0 1 7	1	1	0005					
						COLDR	TRANS.	I DIKI O		METE	R	R DRY		VET CODE		200	SPECIAL DBSERVATIONS										
					CODI			\rightarrow	FORCE (mbs				-														
				,				10	505	22	8	211	<u> </u>	70 7	7 [13			_			-				1	
	MESSENGE TIME		ARD TYPE	DEPTH (m)	Т	°C	ς.	۷	SIGMA	т_		FIC VOLE		₹ ∆ DYN.	Μ,	SOU		02 m1/		D4-P	TOTAL-		02-N	ND3-N	51 D4-51	pН	SC
1	HR 1/10				-									x 10 ³		VELDCITY				g = 01/1	√10 - 0t/	9 84	- 01/1	yg - ot/l	/ID - QU	C	
					222																		- 1				
	100		STD	0000		95	3527 35268		2473 2473		0032232		12	0000		152											
	185	.85 OBS STO		0010	2095 2057		3525		2482		0031407		7	0032			250 241										
	185		BS	0010)57	352		248		00	2270	, ,	002	-		241										
			STD	0020		25	352		248	9	00	3076	7	006	53	152											
			STD	0030		990	352		249		00	3006	6	009	93	152											
	185		BS	0031 0050		986	352		249		0.0	2010		015			225										
			STD	0075		3 7 6 781	350 349		251			2858		015		151											
	185		BS	0077		776	348		252		00	2143))	022			169										
			STD	0100		746	348		253		00	2692	0	029	0 (151											
	185	0	85	0103		741	348		253								163										
			STO	0125		721	348		253		00	2686	l l	035	57	15)	160										
			STD	0150		552	347		254		00	2610	16	042	23	151											
	185		BS	0159		515	346		254			22//		05/	_		132										
	185		STD BS	0200 T0211		338 278	343		257 258		00	2264	18	054	+5	150	026										
	10)		STD	0250		161	341		260		00	2038	38	069	53	149											
			STD	0300	10	29	341	1	262	3	00	1863	30	075	50	149											
	185		BS	0311		003	341		262								944										
	100		STD	0400		329	340		265		00	1613	31	092	24	148											
	185		BS STD	T0410 0500		311 541	340		265 267		0.0	1367	7 1	107	72	148	388										
			STD	0600		503	340		269			1203		120			797										
	185		BS	0616		486	340		269						_		793										
			STO	0700		441	341	-	270			1048		131		14	790										
	105		STD	0800		398	342		272		00	0926	0	141	13		790										
	185		BS STD	T0818 0900		392 375	342		272		0.0	00/1	^	150			790										
			STD	1000		354	344		273 273			0841		150		148	798										
	185		BS	T1020		350	344		274		00	0.,2	. ,	1-0	2		308										
			STO	1100		334	344		274		00	0734	10	165	57	148											
			STD	1200		315	344		274	8	00	0699	7	172		148	324										
			STO	1300		296	345		275			0664		179		148											
			STO	1400		278	345		275			0629		186			343										
	185		STD BS	1500 11525		261 257	345		275		00	0595	5	192	23	148											
	105	,	03	11020	0,	1 6 2	345	02	276	U						148	355										

RENCE	SHIP			TR	MAR	SDEN	STAT	ION TIM		r		ORIGIN			DEPTI	MA)		WAVE SERVATIONS	WEA	CLOUD			NODC
ID.	CODE	LATIT		NGITUDE NO				DAY HR.		rear	CRUI		TATIO		1D 01108	0.5	"	HGT PERT S	COOS		_}		UM8ER
_			1/10		10*	1	_				1			-				1					
1083	BWI	2832	2 N 1	4005 W	087					967	NO				493	8 19	09	2 2	X I	6 2	1	1	0006
						WAT		W1	SPEED	BARE		AIR TE		─ VIS.	ND.		ECIAL						
						CDLOR	TRANS.	DIR,	OR	M E18		BULB	BUL		DEPTH		2 NOIT AV						
								08	513	23	\rightarrow	205	17	2 7	14								
		1				1		001	013	2)									T		Г	T -	
	MESSENGR	CAST ND.	CARD	DEPTH (m)	1	℃	S	./	SIG M.	A -T	SPECE	MALY-X	ME n7	₹ A D		LDCITY	02 ml/	PO4-P	TOTA L→P µg = 01/1	NO2-N	ND3-N	51 D4-51 µg - q1/1	рН
	HR 1/10	1	1116		_		ļ							x 10 ³	1.			μg ~ α1/1	pg - 0171	µg - at/	μg - αl/1	pg - 607	
													- 1										
	'		STD	0000		134	35		246		00	3318	9	0000		5260							
	20		085	0000		134		276	246							5260							
	208	8	085	0009		106		272	247			035				5254							
			STD			105	35		247			3251		0033		5254							
	200	0	STD	0020		1089	35	25 238	247		00	3228	1	0065		5251 5248							
	201	8	OBS STD	0028		070	35		247		0.0	3179	2	0097		5246							
	201		OBS	0030		001		186	249		00	21 13)	0091		5231							
	201	0	STD			989	35		249		0.0	3035	. 1	0159		5229							
	20	۵	OBS	0071		1920		135	250		00	1000	1	023		5212							
	201	0	STD			914	35		251		0.0	2894	4	0234		5211							
	208	8	OBS	0096		874		086	251		00		•	0-3		5203							
		•	STD			867	35		251		0.0	2832	3	0309		5201							
			STD			805	34		252			2779		0379		5186							
	20	8	OBS	0146		726		822	253							5165							
			SID	0150]	701	34	78	253	6	00	2670	12	0443	3 1	5158							
	20	8	085	T0197	1	435	34	369	256	4					1	5078							
			STD	0200]	422	34		256	7	0.0	2389	0	0570		5074							
			STD			217	34		259		0.0	2112	1	0682		5011							
	20	8	085	0293		072		124	261							4967							
			STD			054	34		261		0.0	1898	12	0783		4961							
	20.	8	085	T0387		0851		046	264				_			4900							
			STD			828	34		265			1605		0958		4893							
	2.0	_	STO			0671	34		267		0.0	1381	. 3	110		4849							
	20.	8	OBS	0580		576		081	268		0.0	1216	-	122		4824							
			STD)561	34		269)1215)1069		123		4822							
	20	0	STO	0700 T0767)495)460	34	21 276	270		UC	1003	2	100.		4810							
	20.	8	08S STD			1460	34		272		0.0	00956	7	145		4812							
			STD		_	0418	34		272		-	0876		154		4816							
	20	0	085	T0953		0402		402	273		00	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, 0	124		4819							
	20	U	STO			389	34		273		0.0	0806	4	1628		4821							
			STO			363	34		274			0754		170		4828							
			STO			339	34		274			0703		177		4835							
			STD			318	34		275			0670		184		4843							
			STO			300	34		275			0648		191		4852							
	20	8	085	T1458		291		544	275	55					1	4858							
		~	0.00	,																			

EFER	ENCE	SHIP			ter in	MARS	DEN	STAT	ION TI			ORIGIN	ATOR'S	T	OEPTH	MAX.		WAVE	WEA-	CLOUD	Т		NODC	
TRY DDE	10.	COOE	LATITU		NGITUOE E	SQUA		{	GMT)		YEAR		TATIO		TO	OEPTH OF		ERVATIONS	THER	COOES			TATION	
-	NO.	-		1/10	1/10 =	10"	1"	MO C	AY H	R.1/10		NO. 1	NUMBE	R	MOTTOS	S'MPL"	D18,	HGT PER SE	COOE	TYPE A.M			UMBER	
31	1083	WI	3005	3N 14	0010W	123	00	06 2	21 3	71 1	967	NO7 00	7		4773	15	08	2 2	X2	6 8			0007	
						[WAI	TER	W	INO	BARG	AIR TE	WP. ℃		NO.			1-1-1	1 // 2			'	0007	
							COLOR	TRANS.	DIR.	SPEED	METE	R ORY	WET	VIS.	000	OBSERV	CIAL							
						-	CODE	(m)		FORCE	Imbs	_	BULB											
									09	509	24	0 188	15	3 7	14									
		MESSENGR TIME	CAST	CARD		_			. ,			SPECIFIC VOLU	145	ξ Δ 0 NN. M.	7 .01	IND		PO4-P	TOTAL-P					Τ,
		HR 1/10	T NO.	TYPE	DEPTH (m)	Т	C	7	./	SIGM	A-T	ANOMALY-XI	07	ΣΥΝ, Μ. χ 10 ³	VELC	CITY	0 2 ml/i	μg - α1/1	yg - 01/1	NO2-N µg - 01/I	NO ₃ -N μg - αι/Ι	SI O4-5	pΗ	000
		710	1			-		-						^ ''	+			+	-				-	
				STD	0000	20	080	353	20	34.0		002150	۔ ا	2000	1 ,				J					11
		171		085	0000		80	35:		248		003158	> (0000		246								
		4,1		STD	0010		79	353		248		003161	0 /	0032		246								
		171		085	0010		79	353		248		003161	0 (10 32		248 248								
				STD	0020		31	352		248		003086	8 /	0063		236								
		171		085	0029		93	35		249		00000		, , ,		226								
				STD	0030		91	351		249		003025	8 (0093		226								
		171		085	0048	19	30	351	801	250	5					211								
				STO	0050	19	13	350	8 (250	7	002919	5 (153		206								
		171		085	0073		76	348		252					15	168								
				STD	0075		75	348		252	4	002765	6 (224	15	168								
		171		OBS	0097		52	348		252						165								
				STD	0100		46	348		253		002714		292		164								
		171		STD	0125		80	348		254		002588	6 (359		148								
		171		OBS	0147		95	347		256		005110				125								
		171		085	0190		75	347		256		002412	1 (0421		119								
		2,1		STD	0200		94	342		258 258		002247	s /	538		031								
				STD	0250		30	341		260		001997		644		980								
		171		OBS	0296		09	341		262		001777	۷ (,044		944								
				STD	0300	10	02	341		262		001825	1 (739		942								
		171		OBS	T0396	0.8	44	340	146	264						398								
				STD	0400	0.8	35	340)5	264		001618	5 (912		896								
				STD	0500	0.6	37	340	2	267	6	001367	0 1	061	148	335								
		171		085	0593		0.8	340	02	269	0				14	798								
				STD	0600		04	340		269	1	001218	3 1	190	14	797								
				STD	0700	0 4	48	341	4	270	7	001064	5]	304	147	792								
		171		OBS	T0786		10	342	32	271	9				147	792								
				STD	0800		06	342		272		000942	7]	405	147	793								
				STD	0900		80	343		273		000854	1 1	494	148									
		171		OBS	T0975		62	343		273				_	148									
				STD	1000		56	344		273		000782		576	148									
				STD	1100 1200		34	344		274		0007200		651	148									
				STD	1300		14 95	345 345		275		000666		721	148									
				STD	1400		79	345		275		000636		786	148									
		171		085	T1480		67	345		275		000016	/ 1	049	148									
		1		-00	12400	02	0 1	545	2	213	0				148	200								

ERE	NCE		-			, ex	MARSOE		STATION				ORIGIN	ATO	R*S	OEPTH	MAX		WAVE		WEA-	CLOUO			OBC
T	10.	COOE	LATITU		LONGITUGE	DUE	SOUARE		(GM1		YEA	10		TAT		TO BOTTOA	, OF		SERVA TIC		THER	CODES		S.	UMBER
E	NO.			1/10	1/10	-			YAD OAY					NUM	-		3 Mirc	1	HGT PER	SEA	-	TYPE A.M.			
1 1	083	WI	2956	3N	139532W	1	086 9	9 0	06 22	19	3 19	67	NO7 00	8		4663	14	08	2 2		X8	8 8			0008
								WATE	R	WIN		BARO-	AIR TE	MP.	ZIV Z	NO.	SPI	CIAL							
								LOR 1	TRANS. OH	١,	DR .	A ETER (mbs)	DRY	BU	ET CODE	OBS. OEPTHS	ORCERN	ATIONS							
							-	OOE		_	0100			-		2.6	+								
									10	0 5	11	247	186	1	73 7	14	1		L	-					
	[MESSENGE	CAST	CARD			1 10	. 1	s °/		SIGM A		PECIFIC VOLU		₹ △ D DYN. M.	so	מאט	O 2 ml/	POa-	-P 1	TOTA L-P	NO2-N	NO3-N	\$104-51	рН
		TIME HR 1/10	of NO.	TYPE	OEPTH	(m)	' '		3 %		310 m A ==	'	ANOMALY-X	107	x 10 ³	VEL	OCITY	0 2 11117	hā • q	11/1	μg = et/l	μg = at/l	μg - at/l	μg = at/l	,,,,
	ŀ	1710																							
	1		1	ST	000	0.0	201	70	3529	- 1	2479	- 1	003169	7	0000	1 1 6	246		1	,					
		19	2	085	000		201		3528	5	2479		00510.	'	0000		246								
		19:		OBS	000		201		3528		2481						5245								
		1.	_	ST			206		3528		2481		003148	37	0032		5245								
				ST			203		3525		2487		003099		0063	15	238								
		19	3	OBS	002	27	201	4	3523	1	2492					1.5	5232								
				ST	003	30	200	0.0	3522		2495		003026	6	0093	15	229								
		19	3	OBS	004		194		3518	3	2507						5214								
				ST			192		3516		2511		002881	1	0153		5209								
		19	3	085	000		186		3508	6	2519						196								
			_	ST			183		3504		2522		002778	35	0223		5189								
		19	3	085	000		179		3497	4	2529		003636		0201		5177								
				ST			175		3497		2538		002633		0291		5167								
			_	ST			166	50	3489	_	2554		00248	78	0355	1:	5143								
		19	3	OBS			156	. 6	3484	U	2560		00244		0417	11	5115								
		1.0	2	ST 085			144		3440	/.	2566		00244.	+	0417		5078								
		19	2	51			135		3434	4	2579		002269	3	0534		5051								
				ST			11!		3419		2607		00200		0641		4988								
		19	3	085			108		3414	6	2616		00200	-	0		4967								
		- /	_	ST			10		3411	_	2624		00184	78	0738		4949								
		19	3	OBS	T03	51	089	95	3405	9	2641					14	4912								
		-		ST		00	080	7	3404		2653		001578	35	0909	14	4885								
				ST	0 050	00	06:	23	3400		2675		00136	58	1056	14	4829								
		19	3	085	054	42	056	53	3397	9	2681					1.	4811								
				ST	D 060	00	050	06	3403		2692		00120	59	1185	1	4798								
				ST	0 07	00	04:	34	3413		2708		00105	55	1298		4786								
		19	3	085	T07	18	04	24	3414	5	2710						4785								
				ST			04		3424		2720		00094	39	1398		4792								
		19	3	OBS			03	-	3432		2729						4800								
				ST			03		3433		2729		00086		1489		4801								
				ST	D 10	00	03		3441		2738		00078		1571		4809								
				ST			03:		3447		2745		00072		1647		4818								
				ST			03.		3451		2750		00068	_	1717		4827								
				ST			03		3453		2753		00065	19	1784		4836								
		19	3	085	T13	86	0.2	85	3453	7	2755)				1.	4843								

REFERENCE	SHIP	LATITUDE	LONGITUDE	MARSDEN SOUARE	STATION THE	VE AR	ORIGINATO		DEPTH DEPT	H OBS	WAVE ERVATIONS	WEA- THER	CLDUD			NODC	
CODE NO.	CODE	1/10	LONGITUDE 1/1/10		MO DAY HE			TION MBER	BOTTOM S'MPI		HGT PER SE	2000	TYPE AM			UMBER	
311083	WI	30067N	139596W	1 1		90 1967			4645 1	6 08	2 2	X2	6 8			0009	
				WA		SPEED METE		VIS.		ECIAL							
				COLOR	TRANS. DIR.	OR (mbs		UL8 CODE	DEPTHS OBSER	EVATIONS							
					0.5	510 26	1 194	151 7	14								
	MESSENGR TIME O	CAST CAR	D DEPTH (m1	ס⁴ ז	s */	SIGMA-T	SPECIFIC VOLUME	₹ △ D DYN, M. X 10 ³	SOUND	O2 ml/l	PO4-P pg - 01/1	10TAL-P ug + 01/1	NO2-N ug - al/i	NO3-N pg - 61/1	SI O4Si pg + o1/1	рН	131110
		51		2078	3531	2481	0031519	0000									
	190			2078 2072	35306 3531	2481	0021204	0001	15246								
	190	51 OB5		2072	35307	2482 2482	0031394	0031	15246 15246								
	1,0	51		2036	3528	2490	0030706	0063									
		51	rD 0030	1994	3523	2497	0030043	0093									
	190			1970	35197	2501			15221								
	100	51		1884	3506	2513	0028636	0152									
	190	083 51		1864 1775	35032 3486	2516 2524	0027583	0222	15193 15168								
	190			1755	34838	2528	0027383	0222	15164								
		S1		1757	3492	2533	0026809	0290									
	190	089	0109	1758	34936	2534			15170								
		51		1708	3482	2538	0026492	0356									
		51		1618	3465	2546	0025789	0422									
	190			1565 1376	34565 3431	2551 2572	0000000	0515	15116								
	190	S1 OB5		1293	34214	2582	0023327	0545	15058 15032								
	170	S1		1198	3420	2599	0020843	0655									
		51		1058	3416	2622	0018757	0754									
	190	089	0325	0995	34140	2631			14944								
		S1		0835	3404	2649	0016222	0929									
	190			0770	34018	2657	003000	1070	14876								
		S1 S1		0649 0509	3402 3405	2674 2693	0013853	1079 1208									
	190			0463	34075	2701	0011740	1200	14789								
		51		0443	3414	2708	0010586	1321									
		51		0410	3425	2720	0009473	1421	14795								
	190			0393	34307	2726			14798								
		51		0382 0357	3434	2730	0008565	1511									
	190	S1 089		0341	3441 34446	2738 2743	0007836	1593	14808								
	1,70	S1		0334	34440	2744	0007318	1669									
		51		0312	3448	2748	0006955	1741	14823								
		51		0293	3450	2752	0006623	1808									
		51		0275	3453	2755	0006297	1873									
	1.00	51		0259	3455	2759	0005983	1934									
	190	OBS	T1617	0243	34579	2762			14865								

NCE	SHIP				# A	MARSD	EN	STATION T	IME		ORIGI	NAT(OR*S	DEPTH	MAX, DEPTH		WAVE SERVATIONS	WEA				NODC
10. NO.	COOE	LATITUE		LONGITUDE	9 7	SOUAR		IGMTI		YEAR	CRUISE NO.		TION	BOTTOM	20		HGT PER SI	000				UMBER
			1/10			-		MO DAY			 		MEK		3 MFL	DIL		EA .	TYPE AA		-	
083	WI	30032	2N	139598	V 1	22				1967	NO7 0			4773	13	07	3 2	X1	. 6 7			0010
						L	WAT	_	VIND	BARC		_	VIS,	NO.		CIAL						
							OLOR	TRANS. DIR.	SPEED OR FORCE	M ET E			WET COD	OBS.	OBSERV	SMOITA						
						F	-	0.5	-	+		+		7.6								
		1 - 1				_		05	513	29	9 192	1	154 7	14	L		1	1	1		Г	
	MESSENGR TIME		CARC		(m)	1.1	·c	5 %.	SIGN	1A-1	SPECIFIC VOI	UME	₹ △ □	501	סאט	O 2 m1/	PO4-P	TOTAL-		NO3-N	5104-51	pH
	HR 1/10		TYPE								ANUMALI	YIU.	X 103	VEL	OCITY		yg = 01/1	yg - a1/	µg - al/	µg = a1/1	29 - 01/I	
1		' '	ST	D 00	00 '	20	28	3514	241	81 '	00314	52	0000) 15	231		1	1		'		
	185	5	OBS	00	00	20	28	35139	24	81				15	231							
	185	5	OBS			20		35141	24	83				15	230							
			ST			20		3515	24		00312		0031		230							
			ST			20		3518	24		00306	24	0062		228							
	185	5	085			19		35209	24						225							
			ST			19		3518	24		00300	55	0093		223							
	185	5	OBS			19		35099	25						211							
		_	\$T			19		3509	25		00289	52	0152		204							
	185	5	085			18		35055	25.						189							
	3.04	_	ST			18		3502	25.		00274	31	0222		183							
	185	5	OBS			17 17		34960 3490	25 25		00367	/. O	0290		172							
			5 T				62	3475	25		00267		0356		141							
	189	5	085				36	34711	25		00233	01	0000		134							
			ST				20	3451	25		00246	9.0	0419		099							
	189	5	OBS			13		34293	25		002.0	, ,	0 . 1 /		053							
			ST			12		3426	25		00220	67	0536		030							
			ST			11		3419	26		00197		0641		983							
	189	5	085	02	53	10	99	34177	26	16				14	972							
			ST	D 03	00	10	17	3412	26.		00183	54	0736	14	948							
	185	5	085	T03	48	09	18	34067	26						919							
			ST	D 04	00	08	22	3405	26	51	00159	88	0908	14	891							
			\$T			06	62	3400	26	71	00141	70	1058	14	844							
	185	5	OBS	05	2 1	06	33	33992	26	74				14	836							
			ST			05		3403	26		00123	68	1191		809							
	185	5	OBS			04		34097	27						790							
			ST			04		3411	27		00108		1307		791							
		_	ST			04		3423	27		00096	45	1409		795							
	185	5	085			03		34298	27						799							
			ST			03		3432	27.		00087		1501		801							
			ST			03		3436	27		00081		1>86		807							
			ST			03		3441	27		00076		1665		815							
			ST			03		3446	27		00071		1739		823							
			ST			02		3450	27		00066	73	1808		834							
	189	5	085	T13	48	02	91	34526	27	54				14	839							

REFERENCE				0x	MARSDE	N	STATION TO			ORI	SINAT	2°sC		DEPTH	MAX		WAV		WEA-	CLOUD			NODC	
CTRY ID.	CODE	LATITU		ONGITUDE	SOUARI		IGMTI		YEAR	CRUISE		TION		TO BOTTOM	. OF	00		TIONS	THER	CODES		S	TATION	
CODE NO.			1/10	1/10		_	O DAY HE			NO.		AIDEN	-		3 WLF		-	PEP SEA	+	TYPE AM				1
311083	WI	3000	3N 1	40005W	123 0				1967					4352	16	11	3	2	X1	6 5	l		0011	ı
					<u> </u>	WATE		IND	BARG	· -	TEMP.		VIS.	NO. OBS.		CIAL								
					00	DDE T	IRANS. DIR.	SPEED OR FORCE	(mbs			WET ULB	CODE	DEPTHS	OBSER	/A TION S								
					F		09	S16	26			147	7	14			1							
							0 /	710	1 20	0 10	<u> </u>	,			L		1					T		$\overline{}$
	MESSENGR		CARD	DEPTH (m)	7 %	;	5 %.	SIGM	A-T	SPECIFIC V	DLUME	₽	Δ O.	SO	OCITY	O2 m1/			TOTAL-P	NO2-N	NO3-N	\$1 O4-\$i	рН	S
	HR 1/10		TYPE							ANOMAL		X	103	VEL	OCIIT		פע	+ 01/1	1/10 - gu	μg = a1/1	J\to - gu	μg = at/l		C
								,																
	1	,	STI		20		3523	249		0030	512	0.0	000		229									
	186		OBS	0000	20		35227	249							229									
	186	5	085	0009	20		35229	249							228									
			ST		20		3523	249		0030			031		229									
			ST		200		3522	249		0030			061		229									
			ST		19		3520	24		0030	146	00	91		225									
	180	6	OBS	0033	19		35198	249		0020	= / /	^ .	150		223									
	10	_	STO		189		3512	25		0028	064	U.	150		203									
	186	6	085	0052	18		35106	25		0077					200									
	1.0	_	STO		18		3500	253		0027	222	0.	220		178									
	186	6	OBS STI	0080	17: 17:		34974 3489	25:		0026	5.47	0	287		174									
	186	e	085	0103	17.		34868	25		0020	,01	0.	-01		159									
	101	0	ST		16		3464	25		0025	412	0.3	352		121									
			ST		14		3443	25		0024			+14		081									
	186	6	OBS	0155	14		34397	25		002	- 0 5	•			074									
			STI		12		3418	25		0021	573	0	28		009									
	186	6	OBS	T0206	12	13	34165	25	94					15	002									
			ST	0250	11	17	3415	26	10	0019	749	0.6	531	14	976									
			STI	0300	10	10	3413	263	28	0018	163	0	726		945									
	18	6	OBS	0306	09		34123	26							1942									
			ST		07		3403	26!		0015	710	0.5	396		881									
	18	6	OBS	0408	07		34024	26!							876									
			ST		06		3403	26		0013			041		828									
			ST		04		3404	26		0011	847	1.	167		794									
	18	6	OBS	0613	04		34040	26		0010	- 20	4 .	279		790 789									
			ST		04		3414	27		0010		_	2 1 9 3 7 9		790									
	18	,	ST	0800 T0824	03		34260	27:		0009	431	1.	5 19		791									
	10	0	ST		03		3433	27		0008	558	1.4	469		798									
			ST		03		3441	27		0007			551		806									
	18	6	085	T1031	03		34436	27		0001	,	-	- 71		809									
			ST		03		3445	27		0007	314	1	626		815									
			ST		03		3448	27		0006			698		824									
			ST		02		3450	27		0006			766		833									
			ST		02	78	3453	27		0006			B30		843									
			ST	1500	02	62	3455	27	59	0005	996	13	892	14	853									
	18	6	085	T1578	02	50	34574	27	61					14	861									

ID.	SHIP	LATITE	JOE L	ONGITUDE STATE	MAR SOU	SDEN	STA1	ION TH	ME	R ,	OR CRUISE	IGINAT	OR'S	\neg	DEPTH TO	MAX. DEPTH	08	WAVE SERVATION		R CODES		S.	NODE	
NO.	CODE	•	1/10	1/10	10*	1 10	MO	DAY HI		ľ	NO.		MBER	BC	MOTTO	S'MPL"	S DIR	HGT PER	SEA COU	TYPE AM	7	N	UMBER	
1083	WI	3000		40000W	123				85 19	67	NO 7	012		1/4	480	14	06	2 2	X	1 8 2			0012	
1005	d sar I	3000	/214 1	400000	123	WAI		_	ופון כס.	01		R TEMP	°C			16	1 00	12121	1 ^	1 8 2	1	1	0012	
						COLOR		-		A ET ER			\	/IS. F .	NO. OBS.	SPE	CIAL							
						COSTON	TRANS.	DIR.	00 1"	(mbs)			BULB	DDE	EPTHS	OBSERV	ZNOITA							
								07		264	19	1	168	7	14			1						
				_	_	l	1		1		1	-						1	T			T	1	Т
	MESSENGR		CARD	OEPTH (m)	Т	*c	S	*/	SIGMA-	т .	SPECIFIC Y		UIN.	O M.		DNU	02 ml/	PO4-P	TOTAL-		NO3-N	\$1 04-51	pН	100
	HR 1/10		TYPE		Į						ANUMAL	.,	X 1	03	VEL	OCITY		μg = 01/1	μg - ο!,	1/1p - gu 1/1	yg - 01/1	μg - ot/1		
	1	1	STO	0000	, 2	013	35	10	2482		0031	341	000	ດດ່	15	226		'						
	18	5	085	0000		013		102	2482		-			-		226								
			STO			998	35		2487		0030	964	00	3 1		224								
	18	5	085	0010		998		107	2487							224								
			STO	0020	1	987	35	14	2492		0030	526	00	52	15	223								
			STD	0030	1	976	35	16	2497		0030	0081	000	92	15	222								
	18	5	085	0035	1	971	35	178	2499						15	221								
			STO	0050	1	874	35	80	2517		0028	3249	01	51	15	195								
	18	5	085	0055	1	850	35	049	2520						15	189								
			STO	0075	1	813	35	01	2527		0027	7385	02.	20	15	181								
	18	5	OBS	0085	1	784	34	962	2530							174								
			STO			727		86	2536		0026	555	02	88		158								
	18	5	085	0109		687		789	2540							147								
			STO			1580	34		2551		0025					115								
			STO			433		39	2567		0023	3757	04	13		069								
	18	5	085	0164		361		296	2574							047								
			STO			1218	34		2595		0021	1092	05	25		004								
	18	5	OBS	0219		153		160	2604							984								
			STO			079	-	13	2616		0019		06			962								
			STO			968		09	2632		0017	1/64	07	19		930								
	18	5	085	0328		911		068	2639							913								
	1.0	_	STO			781		02	2655		0015	563	0.8	85		875								
	18	ל	085	T0438		720		8 00	2663							857								
			STO			630	-	02	2676		0013					832								
			STO)514	_	05	2693		0012	2039	11	59		802								
	18	5	OBS	0653)468	-	059	2699							792								
			STO		-)447	_	12	2706		0010					792								
		_	STO)407	_	24	2720		0009	9512	13	75		793								
	18	5	OBS	T0864		386		308	2727		0000		2.7			796								
			STO			377		34	2731		0008	-				799								
		-	STO	_		353		41	2739		0007	789	15	46		806								
	18	5	OBS	T1078		336		458	2744		0007	7717	1.5	2.1		812								
			STO			331		46	2745		0007					814								
			STO	_		311		48	2749		0006					823								
			STO			292		51	2752		0006					831								
			STO			276		53	2755		0006					842								
		_	STO			260		55	2758		0006	5009	18	כט		852								
	18	5	OBS	T1640	(242	34	579	2762						14	868								

REFERENCE	SHIP		Τ.		≃ MAR		STATIO					ORIGIN.	ATOR'S		DEPTH	MAX. DEPTH		WAVE	WEA-	CLOUD			ODC
CTRY IO.	COOE	LATITUDE	/10	NGITUDE 1/10	SOU SOU			MT)	-	YEAR	CRUISE NO.		TATIO		BOTTON	0.5	00.	ERVATIONS	THER	COOES			UMBER
	-			17 10	10*		MO DA		-		_					-			^		1	_	
311083	WI	29592	N 1	39592W	086		06 2			967					4389	15	06	2 3	X1	6 2			0013
						WA1		WIN		BARG)- <u> </u>	IR TEA	_	- vis.	NO.		CIAL						
						COLOR	TRANS.	JIR.	OR	M ETE		DRY ULB	W E T	COD	OBS.	OBSERV	ATIONS						
								_	ORCE 14	26	_	90		+-	14	-							
					-	L	ļ	77	114	20	1 1	70	17	0 /	1 4								
	MESSENGR		CARD	DEPTH L	nl I	*c	5 *,	.	SIGM	A T	SPECIFIC			Z A D		UNO	O ₂ ml/l	PO4-P	TOTAL-P	NO ₂ ~N	NO3-N	5104-51	рΗ
	HR 1/10	T NO.	TYPE	0000000					3,0,,,	,	MOM	ALY-ES	0′	x 10 ³	. AEF	OCITY	0 2	yg = 01/1	μg = α1/I	ug - a1/1	yg - at/1	1/10 - QU	Pti
	I	1	STD	0000) 2	001	349	7	247	16	0.03	197	5	0000	15	221		1 1					
	182	2	OBS	0000		001	349		247		00-					221							
			STO	0010		994	349		247		003	184	9	00 32		221							
	183	2	OBS	0010		994	349		247							221							
			STO	0020)]	995	350	1	248	0 8	003	161	4	0064		223							
			STD	0030		995	350	3	248	32	003	149	5	0099	5 15	225							
	182	2	OBS	0030		995	350		248							225							
			STO	0050		794	350		253		002	668	8	0153	3 15	172							
	182	2	OBS	0050		.794	350		253							172							
			STD	007		.742	349		254		002	599	8	0219		160							
	182	2	OBS	0079		.742	349	73	254	+ 1					15	160							
	182	2	QBS	009		742	349	87	254	+2					15	164							
			STO	0100		738	349		254		002	590		0284		163							
			STD	0129		639	349		256			425		0347		136							
			STO	0150		534	348		257		002	255	4	0405		107							
	182	2	OBS	015		.530	348		258							106							
			STO	0200		306	342		258		002	217	2	0517		034							
	182	2	OBS	020		294	342		258							031							
			STD	0250		148	342		260			986		0622		988							
	10	7	STD	030		.007	341		263		001	796	6	0717		945							
	187	2	510	0400		772	340		265		001	541	7	0884		943							
	18	2	OBS	T040		770	340		265		001	741	1	000		871							
	10,		STD	0500		605	340		268		001	320	2	1027		822							
			STD	0600		1487	340		269			177		1152		791							
	182		oBs	0609		482	340		269							789							
			STD	0700		1437	341		270		001	044	1	1263		788							
			STD	0800		399	342		272			934		1362		790							
	182	2	OBS	T081		1396	342		272				_	- 0-		790							
			STD	0900	0 0	376	343	4	273		000	849	5	1451		798							
			STO	1000	0 0	355	344	1	273	38	000	781	2	1532	2 14	807							
	18	2	OBS	T101	4 C	352	344	20	274	0						808							
			STD	1100	0 0	335	344	7	274	+5	000	721	1	1608	3 14	816							
			STD	120		315	345	1	275	0	000	675	4	1677	7 14	825							
			STO	130		297	345	5	275	55	000	631	5	1743	3 14	834							
			STO	1400		279	345	6	275	7	000	609	3	1805	5 14	843							
			STD	1500		262	345	-	275		000	595	2	1865	5 14	853							
	182	2	OBS	T1514	4 C	260	345	64	275	9					14	854							

REFERENCE SHIP	DE LOI	NGITUDE E	MARSDEN SQUARE	STATION TI	ME	ORIGINATO		DEPTH OEPT	TH ORSE	WAVE RVATIONS	WEA- THER	COOES		51	NODC	
CODE NO.	1/10		10° 1°	MD DAY H	R,1/10	NO. NU	ABER	BOTTOM S'MP	PL'S DIR.	HGT PER SE	CODE	TYPE AM	T	N	LIMBER	
31 1083 WI 2959	6N 14	0022W 0	87 90	06 28 3	182 1967	NO7 014		4297 0	2 07	3 4	X1	8 7			0014	
			WA	TER V	IND BAR	O. AIR TEMP.	°C vis.	NO.	PECIAL							
			COLOR	TRANS. DIR.	SPEED MET OR Emb	ER DRY V	VET COD	OBS. DEPTHS OBSE	RVATIONS							
				06	S19 25	7 198 1	80 7	0.8								
MESSENGR CAST TIME OF NO. HR 1/10	CARD TYPE	DEPTH Imi	T °C	s ./.	SIGMA-T	SPECIFIC VOLUME ANOMALY-2107	₹ △ 0 0YN. M x 10 ³	SOUND	02 ml/l	PO4-P µg - 01/1	TOTAL=P ug = 01/1		NO3-N vg + of/I	\$1.04-\$1 yg + ol/1	рН	500
	STO	0000	2014	3506	2479	0031700	0000									
182	OBS	0000	2014	35056	2479			15226								
182	STD	0010	2010	3506	2480	0031635	0032									
162	SID	0020	2010	35056 3511	2480 2486	0031085	0063	15226 15226								
	STD	0030	1993	3516	2492	0030540	0094									
182	OBS	0034	1990	35180	2494	0030340	00,7	15226								
	STD	0050	1876	3506	2515	0028442	0153									
182	085	0054	1852	35027	2518			15189)							
	STD	0075	1761	3485	2527	0027331	0223	15164								
182	OBS	0083	1735	34796	2529			15157								
	ST0	0100	1705	3474	2532	0026926	0290									
182	OBS	0108	1684	34708	2535			15145								
	STO	0125	1595	3458	2545	0025718	0356	_								
100	STO	0150	1470	3441	2560	0024372	0419									
182	OBS	0162	1413	34350	2568	0021577	0527	15064								
182	STD OBS	0200 T0216	1244 1178	3420 34167	2590 2600	0021577	0534	15012 14992								

REFERENCE	SHIP		T		E MAR	SDEN	STATION TI			С	RIGINA	ATOR'S		DEPTH	MAX		WAY		WEA-	CLOUD		ı	1000	
CTRY ID.	CODE	LATITU		. '1/10	5 5 L.	JARE	(GMT)		YEAR	CRUISE NO.	5	TATION		BOTTOM	0.5	1 0		TIONS	THER	CODES			UMBER	
			1/10		10	11	MO DAY H						-		2 MFF			PER SE	^	TYPE AM	T .			
31 108	3 W I	2958	7N 1	40006W	087				1967	NO 7	01			4535	15	07	[4]	4	X2	818			0015	
						WA		SPEED	SARC)		AP, °C	VIS,	NO. OBS.		CIAL								
						COLOR	TRANS. OIR.	OR	METE (mbs		JLB	WET	CODE	DEPTHS	OBSER	/ATION S								
							07	S15	22		91	182	7	14										
						<u> </u>	107	313	1 22	1 1	71	_		_									_	
	MESSENGE	CAST NO.	CARD	OEPTH (m) .	r °C	s °/	SIGM	A-T	SPECIFIC		ME E	YN. M	SOI	UND	02 ml/		04-P	forat-P	NO2-N	NO3-N	\$1.04-\$1	ρH	S
	HR 1/10	T_NO.	TYPE							ANUMA	461-1416		X 10 ³	VELO	DCITY		9 ע	- ot/I	µg = 01/1	μg - at/l	yg = at/l	µg = at/1		C
								1																
	4	1	STO	0000	o ' a	2017	3510	248	32 '	003	142	8 (000	15	227			,						
	18	0	OBS	000	0 2	2017	35104	248	32					15	227									
			ST			2013	3510	248	32	003	139	1 (031	15	228									
	18	0	085	001		2013	35100	248							228									
			ST			2013	3515	248		003			1063		230									
			STO			2013	3518	248		003	085	4 0	1094		232									
	18	0	OBS	003		2013	35184	248							232									
			STO			1984	3520	249		003	011	7 (155		227									
	18	0	OBS	005		1984	35195	249		000					227									
	1.0	0	STO			1836	3503	252		002	780	0 (227		188									
	18	U	08S ST0	007		l836 l749	35028 3490	252 253		002	475		295		188									
	18	0	OBS	010		1749	34902	253		002	015	0 (1290		165									
	10	O	STE			1598	3463	254		002	542	0 0	360		120									
			STO			1463	3443	256		002			422		080									
	18	0	OBS	015		1458	34418	256		002					078									
			STO			1244	3419	259		002	165	0 0	537		012									
	18	0	OBS	T020	5 .	1222	34173	259	92						006									
			STO	025) :	1107	3415	26]	12	001	957	2 (640	14	972									
			STO			989	3412	263		001	788	8 (733	14	938									
	18	0	085	030		980	34113	263			_				935									
		_	STO			791	3403	265		001	566	6 (901		879									
	18	0	OBS	040		786	34023	265		0.03	226		0.		877									
			STO			0613	3403	267		001			.046		825									
	18	0	STO	060		0488 0481	3404 34038	269		001	1/8	9]	171		791									
	18	0	ST			0438	3415	270		001	045	3 1	283		788									
			STO			397	3425	272		000			381		789									
	18	0	OBS	T080		396	34256	272		000	,,,,		. 201		789									
	10	•	STO			364	3434	273		000	835	7 1	470		793									
			ST			336	3441	274		000			550		799									
	18	0	085	T100		336	34411	274							799									
			STO			0312	3447	274		000	694	8	622		806									
			STO			292	3451	275		000			689		815									
			ST			277	3454	279		000			753		825									
			ST			267	3456	275		000			813		838									
			ST			261	3456	275		000	594	0]	873		852									
	18	0	085	T151	5 (260	34560	275	59					14	855									

									T	AB	LE	1.	11.—	<u> </u>	ont	1111	lea												
REFERENCE					és:	MAR	SOEN	STAT	ION TI	IME.				DRIGIN	ATOR'S		DEPTH	MAX.		١	WAVE		WEA	. c	LOUO			NOOC	1
CTRY IO.	COOE	LATITUO	30	LONGITUOE	DILLFT	sou			GMT)		YE,	A.R	CRUISE	5	TATION		TO	DEPTH	'		RVAT		THE		CODES .			MOITATE	
CODE NO.	1000	<u> </u>	1/10	1/10	J- 2	10°	1.	WO C	DAY H	R,1/10			NO.	1	UMBER		BOTTOM	S"MPL"	S D	IR.	GT PE	R 5E	_ COO	TY	PE AMT			NUMBER	
31 1083	3 W 1	29561	1 N	139554W		086	99	06 3	30 :	198	19	67	N07	01	6		4435	15	0	8	2 4	-	X 1	1 6	6 7			0016	
							WAT	rer	٧	VIN O		BARO		IR TE	MP. °C	VIS.	NO.	SPE	CIAL										
							COLOR	TRANS,	OIR.	SPEED	- 1 1	(mbs)		DRY ULB	WET	CDD	OBS.	OBSERV		2N									
									04	SO 3	-	190		99		17	1.6		_	\dashv									
						_		-	04	303	1	190	, ,	99	178	-	14				_			_					
	MESSENGI	약 NO.	CARO TYPE	OEPTH	lm)	Т	°C	2	٠/	SIG	MA-	-7	SPECIFIC ANOM	VDEU	07 0	Δ O YN, N \times 10^3	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	DCITY	02	m]/I	204 204		TOTAL-		02-N - ot/l	NO3-N ug - at/l	\$1 O ₄ —!		500
	HR 1/10	1					0.1/:	27.1		1		1	003	220	1		1 1 5	223						+	+			+	+
	19	۵	OBS	000 000			014	348	334		+62 +62		003	220	٦ (000		223			I	- 1		1	- 1			1	11
	14	щ.	ST				995	341			*02 *68		003	270	7 0	033		220											
	19	0	OBS	001			995	348			+nc +68		000	2 10	,	000		220											
	14		ST				004	350			+00 +84		003	127	3 0	065		227											
			ST				013	35.			491		003			096		232											
] Q	٥	085	003			013		209		191		000	001	, ,	0 , 0		232											
	1 -4	n	5 T				909	35			509		002	895	3 (156		205											
	19	В	085	005			909		100		509		002	0,5	_ (-) (205											
	1		ST				821	350			524		002	759	7 0	226		183											
	19	9	OBS				821		007		524							183											
			ST				763	34			533		002	686	3 (290		170											
	19	q	OBS				763		932		533							170											
	_		5 T			1	585	341	5 2	2 9	551		002	520	9 0	350	15	116											
			ST	D 015	U	1	430	34	38	2 5	666		002	376	9 0	42]	15	068											
	10	R	OBS	015	2			34	361																				
			ST	0 020	Ū	1	191	34	8 (25	591		002	147	6 0	534	14	993											
	19	9	OBS	T020	16	1	168	341	158	25	594						14	985											
			ST	D 025	0	1	093	34	9.	26	510		001	973	9 (637	7 14	967											
			ST	0 030	0	1	000	34	13	26	530		001	796	7 0	731	14	942											
	10	Q	OBS	030	15	0	1090	34	138	26	532						14	939											
			ST	0 040	0	0	788	341	J 2	26	554		001	556	6 0	900		877											
	19	2	085	040)5	0	778	34	018	26	556						14	874											
			.5 T		0	C	613	34	03	26	579		001			040		925											
			ST	D 060	()(C	489	34	0.5	26	595		001	174	2 1	160		792											
	1.9	8	OBS				479		146		597							789											
			SŦ				434	34			710			033		280		787											
			ST				1395	34			723		000	922	5 1	37		788											
	19	8	OBS				1390		276		724							789											
			ST				1374	34		-	732		000			46		797											
			ST				1356	34			739		000	775	0 1	546		807											
	19	8	OBS				1353		429		740		0.0.	70.				800											
			ST				337	34	-	_	744			736		622		816											
			ST				319	34			747			702		690		825											
			ST				300	34			751			667		762		835											
			ST				281	34			755			631		82		844											
		_	ST				262	34			759		000	595	2 .	889		853											
	19	8	08.5	152	. 8	(257	34	568	/.	760						14	856											

ID.	SHIP	LATITUI	DE	LDN	NGITUDE		SDEN JARE	ITATZ OI	DN TIN		AR	CRUISE	ORIGIN.	ATOR'		DEPTH	MAX DEPTH	OF	WAVE SERVATIONS	WEATHER	CODES		51	IDDC ATIDN
ND.	0001		1/10		1/10	10°	1"	MOD	AY HR.	1/10		NO.	N	I U W B	ER	BOTTON	S'MPL	S OR	HGT PER SE	CODE	TYPE AM	1	N	JAABER
1083	WI	2954	8N	13	9594W	086	99	07 0	1 1	90 19	167	NO7	01	7		4572	15	03	2 3	X 2	6 8			0037
						100	WA		WI	ND I			AIR TEA		-	ND.	1 40	1 0 2	12121	1 12	1 010	1		0017
							COLDR	TRANS.	D.10	SPEED	BARD) -	DRY	WE	V15.	OBS.	Daccor	CIAL						
							CODE	tm1	DIR.	FORCE	Imbs		INTE	BUL	.8	DEPTHS	O B S C R	7 110143						
									04	514	22	1 1	96	17	71 6	14								
	MESSENGR						-	1						-	≥ △ D		1							
	TIME	CAST NO.	CA TY.		DEPTH Im	t '	r "c	5	1/00	SIGMA	-1		VALY-XIC		DYN. A		UND	02 ml/	PD4-P	TOTAL-P ug - o1/1	NO2-N pg - 01/1	ND3-N pg - of/I	SI 04-Si	pН
	HR 1/10			-		-								_	x 10 ³				7,		24.00	pg ~ 0171	pg - 0.75	
		!									- 1			- 1		- 1								
				TD	2200		12-	353		2477		003	256	3	0000		257							
	19,		00		2,100		:20	353		2470							257							
				TO	0017		21.4	353		2473		003	227	Ω	0033		254							
	19		OB		0010		2104	352		2473							254							
				TO	11620		2123	35.		2479			162		0064		234							
				TC	0030		1938	349		2486		003	106	Þ	3096		2.8							
	10		28		2030		938	348		2486		0.00	0.5.0		0.7.0.0		205							
	191		- S - CB	TD	0050		760	346		2514		002	850	5	0155		158							
	1 4						750	346		2514		000	77.5		0.307		156							
	12			TD	0075		747	347		2524		002	7650	2	2226		159							
	1 '		- 0B	S TD	0075		746	347		2524		000	721	7	2201		159							
	1.4		08		0100		741	348		2528		032	731	1	0294		163							
				TD .	125		1640	345		2538		0.2	641	7	0362		133							
				TD	7150		525	344		2551			530		0426		199							
	12		3 A		0155		1501	344		2553		102			5-26		092							
				TO	12) U		265	34:		2591		25.2	245		3046		019							
	10.		20		T 12 9		226	34		2586		062	240.		0 2 40		105							
				TO.	7250		111	34		2607		272	005	í.	3652		97:							
				TO	1301		984	34		2628			810		3747		935							
			15 4		1312		955	34,		2633		0 - 2		~	,		027							
				TD	24 10		786	34		2655		001	563	7	0416		977							
	1.4		13		T0415		766	34,	15	2658							869							
				TD	500		624	34.		2577		001	351	5	1052		950							
				GT	1600	0	504	34,	5	2694		001	188		1189	14	798							
			25	5	2618		7487	34.	63	2697						14	794							
				CT	2760		442	341	5	2709		001	0500	0	1301	. 14	790							
			Ž	†î	าฮาว		400	342	4	2721		000	943	1	1471	. 14	790							
			0.8		T0518		394	342	50	2722							791							
				T D	1900		378	343		2730			859		1401		799							
				GT	1000		358	344		2735		000	784	7	1573		508							
			03		T1020		354	344		2739							610							
				CT	1100		338	344		2745			724		1648		817							
				TD	1200		319	345		2751			672		1718		826							
				TD	1300		30.	345		2755			635.		1784		835							
				TD	1400		282	345		2757			6129		1546		845							
				CT	1570		1263	345		2759		000	5964	4	1906		653							
			- GB	5	T1528		25%	345	52	2750						14	256							

TABLE IV. Observed and interpolated oceanographic data for stations taken by USCGC PONT-CHARTRAIN at Ocean Station NOVEMBER, 23 July-13 August 1967, prepared from NODC Listing No. 31-1142 PW.

REFERENCE	SHIP	LATITU	DE	LONGITUDE		RSDEN	STATION	TIME	YEAR	OR CRUISE	IGINAT	OR'S TION		TO D	AAX. EPTH OF		WAVE RVATIONS	WEA- THER	CLOUD		1 1 2	NODC ATION
CODE NO.	CODE	•	1/10	* '1/10		10	MO TOAY	HR.1/10		NO.		MBER	801			DIR.	IGT PER SE	CODE	TYPE AM	-	N	UMBER
311142	PW	3005	N	140015W	12	3 00	07 23	208	1967	N09	001		42	97	15	09	2		6 6			0001
1	1 [[1	WAI	TER	WIND	1	A 10	R TEMP.			0.		,	- 1 1	1	, 0,0	1	- 1	0001
						COLOR	TRANS. DIS	SPEE OR	D BAR	ER DR		WET CO	0 0	BS. OR	SPECIA							
						CODE	(m)	FOR		s) BUL	LB E	ULB	DEI	PTHS								
							0.	9 50	7 23	10 21	7 7	206 7	1	.4								
	MESSENGR	CAST	CAR	,						SPECIFIC V	VOLUME	₹ ∆ DYN,	0	SOUND	, ,		PO ₄ -P	TOTAL-P	NO2-N	ND3-N	SIO4-St	5
	HR 1/10	T NO.	TYPE		(m)	T *C	s */	\$10	SMA-T	ANOMAL		X 16	3	VELOCIT		2 ml/l	µg = at/t	μg = σ1/1	ug - at/l	yg - al/(µg = al/1	pH C
	HK 1710				-			_											-			
	[1	ST	D 000	0	2065	3476	2	442	0035	167	000	n	1523	16		1		I			' '
	208	3	085			2065	3475		442	0022	-0,	000		1523								
			ST		0	2046	3475		447	0034	798	003	5	1523								
	208	3	085	001	0	2046	3474	5 2	447					1523	32							
			ST	D 002	0	1944	3476	2	474	0032	172	006	8	1520	16							
			ST	D 003	0	1855	3478	2	498	0029	939	010	0	1518	13							
	208	3	085				3477															
			ST			1717	3443		506	0029	295	015	9	1514								
	208	3	085			1712	3441		506				_	1514								
	200		ST			1623	3436		522	0027	812	023	0	1511								
	208	3	085 ST			1618	3435 3441		523 531	0027	064	029		1511								
	208	a .	085			1599	3441		532	0021	050	025	7	1511								
	200	,	ST			1532	3435		542	0026	039	036	.5	1509								
			ST			1445	3426		554	0024		042		1507								
	208	3	085			1422	3423.		557					1506								
			ST	D 020	0	1224	3401	2	579	0022	596	054	8	1500	3							
	208	3	085	0.21	0	1187	3397	3 2	584					1499	32							
			ST			1097	3402		604	0020		065		1496								
			ST			0992	3408		627	0018	1247	075	1	1493								
	208	3	035			0970	3409		631	001/	022	0.0.5		1493								
	208	,	S1 085			0807 0781	3401 3400		651 654	0016	022	092	3	1488								
	201	,	ST			0626	3400	_	677	0013	1501	107		1487								
			ST			0493	3405		695	0011		119	-	1479								
	208	3	085			0475	3405		698	0011		1.4.	,	1478								
			ST			0435	3415	_	710	0010	418	130	8	1478								
			ST	D 080	0	0396	3426	2	722	0009	237	140	6	1478	19							
	208	3	OBS	T081	. 7	0391	3427	3 2	724					1479	0							
			ST			0374	3434	2	731	0008		149	14	1479	7							
			ST			0353	3441		739	0007	789	157	6	1480								
	208	3	085			0350	3442		740					1480								
			ST			0334	3447		745	0007		165		1481								
			ST			0314	3451		750	0006		172		1482								
			ST ST			0296	3454 3455		754	0006		178		1483								
			ST			0260	3455		757 758	0006		184 190		1484								
	201	9	085			0256	3455		759	0000	,002	1,90	, ,	1485								
	200	,	003	, , , , , ,		-230	フマンン		127					- 402	, -,							

TABLE IV .-- Continued

REFERENCE			to the	MARSDEN	STATION TH	ME	ORIGINA	OR*S	DEPTH	MAX. OEPTH		WAVE	WEA-	CLOUD			NODC	
CODE NO. COO)	ONGITUOE TOUR	SOUARE	(GMT)	YEAR		TION	TO	OF		SERVATIONS	THER	CODES		S N	UMBER	
		1/10	1/10		MO DAY HE		 	AABER		S'MPL'	S DW.	HGT PER SE	A 0001	TYPE A.AA	1			
311142 P	V 2951	N 1	3950 W			91 1967			3750	15	11	11		6 5			0002	
				WA	TER W	INO BAR	O- AIR TEMP	. °C ∨IS.	NO.	SPE	CIAL							
				COLOR	TRANS. OIR.	OR IMB		WET COD	OEPTHS	OBSERV								
						TOACE			2.4									
					17	506 23	30 244	222 8	14			Ļ,,,				7		
MESS	ME OL NO.	CARD	DEPTH (m)	T °C	5 %.	SIGMA=T	SPECIFIC VOLUM	₹ Δ D	sou	סאנ	O2 ml/l	PO4-P	TOTA L-P	NO2-N	NO3-N	51 04-5	рН	S
HR		TYPE	0.000		"	J.OMIN-	ANOMALY-X107	X 103	, AETC	CITY	0,2, .	µg = 81/1	µg - a1/1	µg = 0t/1	μg - ol/l	µg = a1/1	1	c
1	'	STO	0000	2097	3480	2437	0035657	0000	15	245		1			'	1	1	
	191	OBS	0000	2097	34802	2437				245								
	191	OBS	0009	2075	34794	2442			15	241								
		STD	0010	2075	3480	2443	0035162	0035	15	241								
		STD	0020	2071	3482	2445	0034970	0070		242								
	191	OBS	0029	2068	34833	2447				242								
		STD	0030	2053	3482	2450	0034504	0109		238								
	191	OBS	0049	1830	34633	2494	0030304	017		177								
	101	STD	0050	1824	3462	2494	0030394	0170		176								
	191	OBS STD	0073 0075	1726 1726	34493 3450	2508	0029070	0244		149								
	191	OBS	0075	1726	34569	2509 2518	0029070	0242		149								
	171	STO	0100	1709	3456	2518	0028303	0316		149								
		STD	0125	1677	3448	2519	0028233	0387		143								
	191	OBS	0149	1594	34409	2533	0020233	0501		120								
		STD	0150	1586	3440	2534	0026908	0456		118								
		STD	0200	1247	3398	2573	0023245	0581	1 15	011								
	191	OBS	0201	1242	33978	2574			15	009								
		STD	0250	1094	3403	2605	0020227	0690	14	966								
		STD	0300	0966	3408	2631	0017783	0789	14	929								
	191	OBS	0305	0955	34088	2634				926								
		STD	0400	0781	3402	2656	0015541	0951		875								
	191	OBS	T0402	0778	34022	2656	_			874								
		STD	0500	0614	3403	2679	0013349	1096		826								
	191	OBS	0598	0497	34028	2693	0011027	122		794								
		STD	0600 0700	0496	3403 3414	2693 2708	0011937			794 790								
	191	OBS	T0792	0404	34230	2719	0010380	100.		790								
	171	STD		0402	3424	2720	0009454	1435		791								
		STD		0373	3433	2730	0008535	1529		797								
		STD	1000	0347	3441	2739	0007720	1606		803								
	191	OBS	T1006	0346	34418	2740	-			804								
	131		1100	0324	3445	2744	0007255	168		811								
		STD	1200	0304	3448	2749	0006863	1752	2 14	819								
		STD	1300	0286	3451	2753	0006498	1819	9 14	829								
		STD	1400	0271	3454	2757	0006155	1882	2 14	840								
	191	OBS	T1491	0260	34567	2760			14	851								

NCE					e 14.4	RSOEN	STATI	ON TIM	ı s		Γ	ORIGIN	ATOR	R*S	OEPTH	, MAI		WAV	E	WEA-	CLOUD	Τ -		NOOC	
IO,	SHIP	LATITU	DE LO	NGITUDE	F S 20	UARE	21×11	SMII	YE	AR	CRUIS	E S	TATE	ON	TO	Deer	H O8	SERVA	ZNOIT	THER	COOES		5	TATION	
NO.	CODE	•	1/10	1/10	□ Z 10°	1.	MO D	AY HR	1/10		NO.	. 1	MUN	BER	BOTTO	M S'MPL	'S DIR.	HGT	PER SEA	COOE	MA 39YT	7		UMBER	
142	PW	2959	5N 1	39570W	08	6 99	07 2	5 2	00 19	67	NO	9 00	3		402	3 1	5 08	2			6 7			0003	
			- 1		, ,	WA	TER	WI	NO	BARC) a L	AIR TE	MP. 1	C VIS	NO.	S.F	ECIAL								
						COLOR	TRANS.	DIR.	SPEED	AM ETE	R	DRY	WI	ET COE	OBS.	00000	VATIONS								
						COOE	(m)	_	FORCE	(mbs		BULB	BU		-	-									
								02	505	24	7	217	2	06 7	14			1			7				-
	MESSENGR	CAST	CARO	DEPTH	()	T *C		٠/٠.	SIGMA	, l		ric volu		₹ △ C	S	OUND	O2 m1/			TOTAL-P	NO2-N	NO3-N	5104-5	pH	S
	MESSENGR TIME I	Y NO.	TYPE	DEFIN	(tu 1		,	***	310///	-,	ANO	W W LY - X I	107	X 103	\ VE	LOCITY	01	ħβ	- 01/1	νg - o1/l	μg - at/l	yg = a1/1	µg = a1/1	F	C
	7.0																1								
	l	1 1	STD	000	0	2095	347	71	2430) '	00	3630	7	0000) 1	5243	,								
	200)	OBS	000		2095	34	705	2430)					1	5243									
			STO	001	0	2084	347		243	3	00	3608	8	003		5242									
	200)	OBS	001	0	2084	347	701	243	3						5242									
			STD	002		2070	34		243			3570		007		5240									
			STD	003		2023	34	_	245		00	3447	4	010		5229									
	200)	OBS	003		2023	34		245							5229									
			STO	005		1827	34		250		00	2971	. 7	017	_	5178									
	200)	OBS	005		1827	34		250		0.0	2022	,	03/		5178 5144									
		^	STD	007		1706	345		251		00	2823	0	024		5144									
	200)	OBS	007		1706	345	552	251		0.0	2760	1 2	031		5144									
	200	2	STD OBS	010		1687	345		252		00	2 100	, _	051		5143									
	200	J	SID	012		1621	344		253		0.0	2694	. 3	038		5126									
			STO			1527	34:		254			2586		044		5099									
	200	0	OBS	015		1518		358	254		~ 0					5097									
			STD			1247	341		257		0.0	2265	59	056	9 1	5012									
	200	0	OBS	020	15	1224	340	044	258	2					1	5004									
			STD	025	0	1091	340	08	261	0		1980		067		4966									
			STD	030	0	0966	340		263	1	0.0	1780)5	076		4929									
	201	0	OBS	030		0955		084	263				_			4926									
			STD			0789	341	_	265		0.0	1575	55	093		4878									
	201	0	OBS	TO41		0770		006	265				. ,	100		4872									
			STD			0628	341		267			1358		108		4831									
	20	^	STD	060		0507	34	03	269 269		0.0	1206	54	121		4799									
	20	U	085 STD			0441	34		270		0.0	1048	2 12	132		4790									
			STD			0395	34.		272			0929		142		4788									
	20	0	OBS	T081		0389		270	272		00	10723	, ,	1 7 2		4789									
	20	0	STD			0373	34		273		0.0	0846	- 1	151		4797									
			STD			0354	34	_	273			0772		159		4807									
	20	0	OBS	T101		0351		430	274						1	4808									
			STD			0335	34		274	4	0.0	0733	37	166	9 1	4816									
			STD			0316	34	48	274	8	0.0	0697	79	174	0 1	4825									
			STD	130	00	0298	34	51	275	2	0.0	0663	36	180	8 1	4834									
			STD	140	0	0279	34	54	275	5	0.0	0627	77	187	3 1	4843									
			SID	150	00	0261	34	56	275	9	00	0591	18	193	4 1	4853									
	20	0	OBS	T152	0	0257	34	568	276	0					1	4854									

RENCE ID.	SHIP	LATITUDE	LC	DOUTE BOUTEN		SDEN	STATIO (G:	N TIME	YE	AR CI	ORIGIN	ATOR'S		DEPTH TO	MAX, DEPTH OF	OBS	WAVE SERVATIONS		R CODES		S	NODC TATION
NQ.	2001	* 1.	10	*1/10 G Z	10*	1*	MO DA	Y HR.	/10		NO. I	UMBER	18	MOTTO	S'MPL"	S DIR.	HGT PER S	EA COE	TYPE A W	T	N.	UMBER
1142	PW	3007	N 1	39578W	122	09	07 20	6 18	8 19	67 1	109 00	4	4	755	15	08	2		6 7			0004
			- 1			WAT		WIN	0	BARO+	AIR TE			NO.			1-11		,			000
						COLOR	TRANS.	DIR. S	PEED	METER	DRY	WET	VIS.	085.		C1AL 'ATIONS						
						CODE	lm?		OFCE	(mbs)	BULB	BULB	1	DEPTHS								
								09 5	06	254	228	222	8	13								
	MESSENGR	CAST	CARD								ECIFIC VOLU	45 \$ 4	2 D.	101	ONL		PO ₄ =P	TOTAL-	P NO2-N	NO ₃ -N	51 04-51	
	TIME	Y NO.	TYPE	DEPTH (m)	1	*C	5 */	4.	SIGMA-	-1 1	NOMALY-X	OYN	1. M. 10 ³		CITY	02 m1/1	yg = a1/1	yg . at/		pg - at/1	ug = a1/1	pН
	HR 1/10							-		+		 ^		-	-		+		1			-
			C.T.D.	0000	_		2/7	_ 1	2,07	١,	000573	1 00		1.5	244						1	
	200	,	STD	0000		1092	347		2437		003567	2 00	00		244							
	188	5	OBS STD	0000		2092	347	-	2437			2 00	2.0		244							
	188	1	085	0010		085	347		2439		003551	3 00	36		243							
	136	,	STD	0020		.996	347		2456		003389	8 00	70		220							
			STO	0030		915	346		2472		003243		03		198							
			STD	0050		776	345		2497		003010		66		160							
	188	3	OBS	0050		776	3450		2497		,0,00,0	- 0-	00		160							
		~	STD	0075		646	344		2520		002799	8 02	39		124							
	188	3	OBS	0075		646	344		2520						124							
			STD	0100		660	345		2528		002733	8 03	0.8		134							
	188	3	oBs	0100	1	660	345	44	2528					15	134							
			STD	0125	1	525	344	2	2549		002538	0 03	74	15	095							
			STD	0150]	403	342	9	2565		002388		35		058							
	188	3	OBS	0152			342	78														
			STD	0200]	197	340	3	2586		002195	2 05	50	14	994							
	188	3	085	0205]	179	340	15	2588	}				14	989							
			SID	0250		.057	340		2612		001955		54		953							
			STD	0300		940	340	_	2633		001756	8 07	46		919							
	188	3	085	0305		929	340		2635						916							
			STD	0400		761	340		2657		001534	6 09	11		867							
	188	3	085_	T0410		745	340		2659						862							
			STD	0500		598	340		2681		001313		153		819							
	100		STD	0600		481	340		2697		001160	1 11	.77		788							
	188	5	OBS	0610		1472	340		2698		201022	2 12	0.7		786							
			STD	0700)434	341		2710		001033		87		787							
	100		STD OBS	0800		399	342		2723		000919	7 12	84		790							
	188	3		T0812		395	342 343		2724		200837	6 1/	72		791							
			STD	0900 1000)372)349	344		2732		000837 000759		52		805							
	188	2	085	T1012		346	344		2741		000139	J 1-	24		805							
	100	,	STD	1100		327	344		2745		000721	5 16	26		812							
			STD	1200		307	344		2749		000685		97		821							
			STD	1300		290	345		2753		000652		763		831							
			010		,			-														
			STD	1400	(275	345	4	2756	1	000621	6 16	327	14	841							
			STD	1400 1500		275	345 345		2756		00062] 000591		888		841							

							,										T	1			-						1
REFERENCE	SHIP	LATITUDE		NGITUDE	E E M	ARSDEN	S	ATION (GM	TIME		YEAR		ORIGIN			DEPTH	UEPIP		W /	AVE ATIONS	WEA		DUD			NODC	
CODE ND.	COOE	1/1		1/10	N N N		MO		HR.1/		ILAN	CRUIS NO.		OITATE NUMB		BOTTO	M S'MPL	1		T PER S		e 1	AMT			UMBER	
311142	PW	2959 N				36 99		27			967	NO	9 00			438	9 15	1.1	+	1		6	1			0005	
31 1142	PW	2959 14	1 13	1956 W	100		ATER	121	WIN		1	-	AIR TE		-	_	7 10	11	1 4	1 1	l	1 0	6		ş	0005	
						COLO		25	- 5	EED	MET		DRY	WE	- VIS	C 003+	OBSERS	CIAL VATIONS									
						COD		15. DI		DR CE	tmb		BULB	BUL		DEPTH	S	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,									
											2.2	4	217	21	1 7	14											
	MESSENGE						<u> </u>		Ť			tac C II	C VOLU		₹ Δ E	90	DUND		Ť	PO4-P	TOTAL-	NO ₂	-N	NO3-N	51 04-51	Ī	S
	MESSENGR TIME	T NO.	TYPE	DEPTH In	nl	ī °C		5 %		SIGM	A -T	AND	WALY-X	107	DYN. A X 10 ³	4. VE	LOCITY	O2 ml/	۱ ا	ug = a1/)	yg = e1/			1/10 - gu	yg - al/l	pН	C
	HR 1/10	-			-		-		_					-	× 10	_			+			1	-				-H
	1		CTO	0000	,	2084	.	471	- 1	243	a /.	00	3599		0000	, ,	5241 5241		ŀ		l	1	- 1			I	
	199		STD 8S	0000		2084		470		243 243		00	2277	' >	0001		5241										
	19!		35	0009		2076		470		243							5240										
	17.		STD	0010		2076		471		243		0.0	3581	5	003		5240										
			STD	0020		2074		471		243	-		3581		007	~	5241										
	19		BS	0029		2073		473		243							5243										
			SID	0030		206		475		244		00	3536	9	010		5241										
	195	5 0	BS	0049	9	1920) 3	485	4	248	8.8					1	5205										
			STD	0050)	1904	4 3	482		248	39	00	3086	1	017	4 1	5201										
	19	5 0	185	0073		1660		438		25]							5128										
			STO	0075		1662		440		251		00	2835	4	024		5129										
	19	5 0	185	0098		1669		453		252							5136										
			STD	0100		1666		453		252			2756		031		5136										
			STD	0125		1626		453		253		00	2676	4	038		5128										
	19	5 0	BS	0149		1588		445		253		0.0	267.5	. 7	045		5119 5117										
			STD	0200		1582		445		253 257			2645 2333		045		5031										
	199	5 0	BS	10202		1292		409		251		00	2333	7	021		5028										
	17.	,	STD	0250		1111		409		260		0.0	2018	12	068		4975										
			STD	0300		0966		408		263			1777		078		4929										
	19	5 0	BS	0305	5	0953	3 3	408		263							4925										
	19	5 0	BS	T0397	7	0763		400		265	57					1	4867										
			STD	0400		0758		400		265			1535		094		4866										
			STD	0500		0602		403		268			1319		108		4821										
			STD	0600		0489		405		269		00	1171	. 9	121		4792										
	19	5 0	185	060		0488		404	-	269							4791										
			STO	0700		0432		416		27]		00	1030	9	132		4786										
	19	5 0	BS	T0799		0392		426		272							4787										
			STO	0800		0392		426		272			0916		142	-	4787										
			STO	0900		0375		434		273			0848		150		4798										
	1.0		STD	1000		0358		442		273		0.0	0779	18	159		4808										
	19	5 0	BS	100		0358		441		273		0.0	0726	. 9	166		4808 4818										
			STD	1200		032		452		275			0675		173		4827										
			STD	1300		030		455		275			0636		180		4836										
			STD	1400		028		456		27			0611		186		4844										
			STO	1500		0259		457		276			0585		192		4852										
	19	5 0	BS	T1500		0259		456		276							4852										

																			1 44	AAX.			_		CLOUD			NODC	
REFE	RENCE						in the	MARS	DEN	STATIO	N TIM	E	ME A B		DRIGINA			DEPTI	H OI	EPTH		WAVE RVATION	15	WEA-	CODES		S.	TATION	
CTRY	10.	CODE	LATITU	DE		GITUDE	VOC.	sau			MTI	- 1	YEAR	CRUISE NO.		OITATIO BEMUUE		BOTTO	M 51	OF MPL'S		HGT PER		CODE	TYPE A M		N	UMBER	
CODE	NO.	1000		1/10		1/10	=	10"	1.	MO DA	Y HR.			-				2	\neg				_		6 6			0006	
31	1142	PW	3003	N	13	9585W	1 1	122	09	07 29	9 00) 4 []	967	N09				453	5	15	04	1		1	616	1	1	0000	
1 31		-1						[WAT	ER	WIF	40	BARG	o	AIR TEA	MP. ℃	_ vis.	NO.		SPEC	IAL								
								ĺ	COLOR	TRANS.	OIR.	SPEED	METE		DRY	BUL	COD	DEPTH	OB	BSERVA	ZHOIT								
								ļ	CODE	fw.1		FORCE	(mbs		ULB	_													
								- 1			09 :	509	21	3 2	33	21	7 7	14											
				1				$\overline{}$						CACCION	c volu	AA E	Z ∆ D	, ,	OUNT	D .	- 14	PO ₄ =	P T	OTA L-P	NO2-N	NO3-N	\$104-5	рН	S
		MESSENG	CAST		ARD PE	DEPTH	(m)	T	°C	S *.	4.	SIGN	T-AP	ANON	ALY-XI	07	X 10 ³	۸. V	ELOCI		02 ml/l	yg - 01	71 1	1/10 ~ Qu	µg = at/l	µg - α1/1	μg - α1/	1	C
		HR 1/1								-						\rightarrow				-		-							
											- 1					_ 1	- 0 -	_ ,		1		1	- 1		l	1	1	1	
		i	'	' 5	STO	000	0.0	2	120	347		24		003	3681	. 7	000		525										
		0.0	4	0.6	35	000	0 (2	120	347		24.							525										
					STD	001	10	2	090	347	2	24	33	003	3608	34	003		524										
		0.0	14		BS	001	10	2	090	347		24					- 0		1524										
		,			STO	002	20	2	072	348		24			3452		007		1524										
					STD	003	30		054	348		24	-	00	3405	59	010		1523										
		0.0) 4	0	BS	003	30		054	348		24							1523										
					ST0	005	50		749	344		24		00.	2988	3 T	017	-	151										
		0.0) 4	0	BS	005	50		749	344		24					0.37		151: 151:										
					STO	001			685	345		25		00.	2805	5 3	024												
		0.0) 4	0	BS	00.	75		685	345		25							151: 151:										
					STO	010	00		704	346		_	28	00.	2733	39	031												
		0.0) 4	0	BS	010	00		1704	346			28						151										
					STD	013	25	1	1627	345			35		267		037		151										
					STD	01!	50	1	1522	343			46	00	2568	81	044	-	150										
		0.0) 4	0	BS	01	51	1	1517	343	178		47						150										
					STD	021	00		1216	340			82	00	223.	75	056	-	150										
		0.0	0.4	0	BS	T021	04		1196	340	006		84						140										
					STD	0.2	50		1073	340			11		196		067		149										
					STD	03	00	(954	340	8 (33	0.0	176	10	076		149										
		01	0 4	0	85	0.3	03	(1947	340			34						149										
					STD	04	00	(759	340			57	00	153	76	092		148										
		0	0 4	0	BS	T04			756	340			57				10-		148										
					STD	05			0603	340			088		131		107	-	148										
					STD	06			0490	341			96	00	116	05	119	,)	147										
		0	04	0	BS	06			0486		058	_	97	0.0	100	20	130	16	147										
					STD	07			0433	34			711		103				147										
					STD	8 0	00		0393	34			723	0.0	092	10	140	13											
		0	04	C	BS	108	-		0393		259		723			0.0	1/-	2.1	147										
					STD		00		0374				732	0.0	083	98	149	4 T	147										
		0	04	C	BS	T09			0357		420		739	0.0	077		3 6 1	7.1	148										
					ST0		00		0355				739		077		15	-	148										
					STD		.00		0336				744		073				148										
					STO		00		0317			_	748		069		17		-	-									
					STO	-	00		0298				752		0066		17.		148										
					STO	_	00		0279				756		062		18		148										
					STD		00		0260				760	00	058	70	19	1.4		852									
		0	04	(085	T15	00		0260	34	568	2	760						1 46	072									

EFER	ENCE	SHIP			- E	MARSDEN	STAT	ION TI			ORIGIN	ATOR'S		DEPTH	MAX		WAVE		WEA-	CLOUD			NODC	
RY	ID.	CODE	LATITU		NGITUDE LE	SOUARE		GMTI		YEAR		TATION		OT MOTTO	OF	00	SERVATION		THER	CODES			UMBER	
\rightarrow		-		1/10	1/10	10" 1"	MD C					NUMBER	-		S'MPL	S Dir.	HGT PER	SEA.	CODE	TYPE AM	-		O WIBER	
31	1142	PW	3004	9N 14	003 W	123 00	07	29 1	92 1	967	NO9 00	7	4	+297	15	07	2			7 4			0007	
						WA	TER	W	IND	BARD	AIR TE	MP. °C	V15.	ND.	5 01	CIAL								
						COLOR	TRANS.	DIR.	2 be ED	METER	DRY	WET	CODE	OBS.		VATIONS								
						CODE	Im)		FORCE	(mbs)		BULB												
								05	SII	234	222	206	7	14										
		MESSENGR	CAST	CARD							SPECIFIC VOLU	ME S	Δ D.	Tsoi	DND		PO4~P	1,0	TAL-P	NO2-N	NO3-N	810. 6		5
		TIME	NO.	TYPE	DEPTH (m)	1 10	S	*/,.	SIGM	A-T	ANOMALY-XI	07 D	N. M.		CITY	O2 m1/	μg = σ1/			ug - at/1	yg - el/l	\$1 O4-\$1 yg - a1/1	pН	C
		HR 1/10	\vdash			-	-			-			. 10	-			-	+						+
					2000	2007	1		1		000105	_		1					- 1					
		100		STO	0000	2087	34		243		003605	7 0	000		241									
		192		OBS	0000	2087	34		243						241									
		192	-	OBS	0009	2085	34		243		002500	7 0	000		242									
				ST0 ST0	0010	2085	34		243		003589		036		243									
		1.01				2082	341		244		003492	<i>y</i> 0	071		245									
		192	-	OBS STD	0028	2080		932	245		002615	7 0	100		247									
		192		085	0030	2079	349	96 983	245		003415	1 0	106		247									
		172	-	STD	0050	1954	341		247		003158	0 0	172		230									
		192	,	OBS	0071	1708		464	251		003130	0 0	112		216 143									
		1,7	-	STD	0075	1701	34		251		002872	0 0	247		142									
		192	,	OBS	0095	1659		473	252		002012	0 0	,		132									
			-	STD	0100	1649	344		252		002763	2 0	317		130									
				STO	0125	1583	344		253		002669		385		113									
		192	2	QBS	0145	1509	34:		254		002007	0 0	- 0 -		092									
				STD	0150	1478	34:		255		002534	1 0	450		083									
		192	2	OBS	T0196	1236	340		257						007									
				STD	0200	1224	340)4	258		002237	6 0	570	15	004									
				STD	0250	1085	341	80	261		001970		675		964									
		192	2	085	0290	0985	340	083	262	8					934									
				STD	0300	0963	340	7	263		001783	0 0	769		927									
		192	2	OBS	T0384	0789	340	004	265						875									
				ST0	0400	0756	340	01	265		001529	6 0	934		865									
				STO	0500	0582	340	20	268		001294		076		813									
		192	2	OBS	0580	0484	340	36	269	5				14	786									
				STD	0600	0472	340	16	269	8	001142	7 1	197	14	785									
				STD	0700	0423	34.		271		001013	0 1	305	14	782									
		192	?	OBS	T0774	0395	347	250	272	2				14	784									
				STD	0800	0390	342		272		000901		401	14	787									
				STD	0900	0370	343	36	273		000827	8 1	488	14	796									
		192	2	OBS	T0964	0358	344		273					14	802									
				STD	1000	0351	344		274		000754		567	14:	806									
				STD	1100	0332	344		274	7	000702	9 1	639	14	815									
				STD	1200	0313	345		275		000658		708		824									
				STO	1300	0295	345		275	6	000621	8 1	772		833									
				STO	1400	0277	345	-	275		000607	0 1	833		843									
		192	2	OBS	T1466	0265	345	61	275	9				14	849									

ID.	SHIP	LATITU	OE 1/10	LON	VGITUOE 1/10	DRIP	MARS SOU	ARE	STATION THE	YEAR		TATION IUMBER	OEPTH TO BOTTOM	OEPTI OF S'MPL	1 08	WAVE SERVATIONS	WEA- THER COOE	COOES		51	NOOC 'ATION UMBER	
			-			+ +		-						+	1	1 1 1 1						
1142	PW	3008	N	14	006 W		123			99 1967			4297	15	0.7	,111 1	1	6 6	ļ		0008	
							-	WAT		BAR		V15			ECIAL							
							1	COLOR	TRANS OIR	DR (mb)		BULB CO	DEPTHS	OBSER.	ZNOITAV							
							-		0.7	70.01			1.									
									07	504 24	0 250	228 7	14			L.,	1					
	MESSENGI		CAF	RO	DEPTH			*C	s %.	516.4.4.7	SPECIFIC VOLU		501	DND	02 ml/	PO4-P	TOTAL-P	NO2-N	NO3-N	SI 04-SI	ρН	S
	TIME HR 3/10	NO.	TY	PE	DEFIN	(m)		C	3 741	SIGMA-T	ANOMALY-XI	x 10 ³	AETO	OCITY	02 1111	μg + α1/1	μg = 01/I	μg - αt/1	μg - 01/1	μg + α1/1	, ,,,	C
	1111 17 10																					
	l	1		TD	000	10	2	117	3474	2427	003664	5 000	າ່ 15	250		1	1	1				
	19	Q	08		000			117	34737	2427	00300.			250								
	- 1			TD	001			109	3475	2430	003639	4 003		249								
	19	9	08		001			109	34748	2430				249								
	- /	_		TD	002			006	3474	2457	003385	9 007		223								
	19	9	ОВ		002				34722		, ,											
				TD	003	0	1	919	3472	2478	003188	4 010	5 15	200								
	19	9	08		004		1	796	34657	2504			15	168								
				TD	005			792	3465	2504	002942	4 016	6 15	167								
	19	Q	ОВ		007			719	34615	2519	00-712	, , ,		149								
				TD	007			719	3462	2520	002803	7 023		149								
	19	9	OB		009			699	34662	2528				147								
				TO	010	0	1	696	3466	2528	002730	3 030	7 15	147								
				TD	012			615	3453	2537	002652			124								
			S	TD	015	0	1	518	3439	2548	002550	9 043	9 15	097								
	19	9	ОВ	S	015	0	1	518	34392	2548			15	097								
			S	TD	020	0	1	272	3409	2576	002291	1 056	0 15	021								
	19	9	08	S	T020	3	1	259	34083	2578			15	017								
			S	TD	025	0	1	115	3409	2606	002017	6 066	8 14	974								
			S	TD	030	0	0	981	3409	2630	001796	2 076	3 14	1934								
	19	9	08	S	030	2	0	976	34092	2630				933								
			S	TD	040	0 (0	770	3401	2656	001546	2 093		870								
	19	9	08	S	T040	2	0	766	34010	2657				869								
				TD	050		_	607	3403	2680	001325			823								
				TD	060		_	491	3404	2695	001178	8 119		792								
	19	9	08		060			487	34043	2695				791								
			_	TD	070			436	3415	2709	001043			788								
		_		TD	080			396	3425	2722	000931	1 140		789								
	19	9	08		T080			395	34254	2722	20005	0 1/0		789								
				TD	090			376	3433	2730	000854			798								
		_		TD	100		_	357	3442	2739	000779	1 158		808								
	19	9	08		100			356	34420	2739	0007:0	0 165		808								
			_	TD	110			338	3445	2743	000740			817								
				TD	120	-		319	3448	2747	000704			826								
				TD	130			300	3451	2751	000666			835								
			_	TD	140			281	3454	2755	000629			844								
	1.0			TD	150			263	3457	2759	000592	0 192										
	19	9	08	5	T150	14	U	262	34567	2760			14	+854								

REFERENCE	SHIP			or in in	MARSDEN	STATIO	ON TIME			ORIGINA	ATOR'S		OEPTH	MAX.		WA	VE A TIONS	A3W	CLOUT			YOUC	
CTRY ID.	CODE	LATITUE		NGITUDE	SOUARE	l	AY HR.1	YE,	4.R		UMBER		OT MOTTOR	OF S'MPL"	0.0		PER SI	COD		1	N 2.	UMBER	
	2011		1/10	1/10	123 00		1 18		67			-	4.73		-	_	FEK 31	-	6 7			0000	
31 1 1 4 2	2 PW	30059	3N 14	+0010W		O7 3	MIN T T O		0 /	NO9 OOS		- 1	4472	15	09	1 1	1 1	1	1011	1	- 1	0009	
					-	R TRANS.	1	SPEED	8 A RO)* 	WET	VIS.	NO. OBS.	SPE	CIAL								
					COD		DIR.		(mbs)		BULB	1000	DEPTHS	CB2CKA	AHONS								
							11 5	07	230	0 228	206	7	14										
						'	-				. 5	^ D	1			Ή.			T.,,		(10.0		7.
	MESSENGR	LCAST M NO.	CARD	DEPTH (m)	1 °C	2 .	·/	51G M A =	-1	ANOMALY-110	NE DY	△ D N. M.	VELC		02 ml/		9 - o1/I	101AL-1		NO3-N NO - 01/I	\$1 D4-\$1 99 - 01/1	ρН	l c
	HR 1/10					-	-					. 10-	+					-	-	1	-		+1
				2000	7260	12/3	7.0	24.22		0036970	1	000	1.5	256		1			1	l	l	ļ	1.1
	184		STD 085	0000	2140 2140			2423		0036970	U U	000		256 256									
	104	+	570	0010	2131	347		2426		003677	1 00	037		255									
	184	4	085	0010	2131	347		2426		000011				255									
	20-		STD	0020	2032	346		2444		003509	4 0	073		229									
			510	0030	1956			2460		003357		107		210									
	184	4	085	0030	1956	346	512	2460)				15	210									
			STD	0050	1870	347	7 1	2490)	003082	3 0	172	15	190									
	184	4	085	0050	1870	347	712	2490)				15	190									
			STD	0075	1756	346	55	2513		002866	9 0	246		160									
	184	4	OBS	0076	1753			2513						159									
			ST0	0100	1726			2524		002769	5 0	316		156									
	184	4	085	0101	1724			2525		000157		201		156									
			STD	0125 0150	1604 1481			2537		002657		384 449		121									
	184	·	085	0153	1467			2551		002340	<i>5</i> 0	747		080									
	10.	*	STD	0200	1245			2579		002262	1 0	569		011									
	184	4	085	10207	1216		38	2583		30202				002									
			STD	0250	1084			2608		001990	6 0	676		963									
			STD	0300	0955	340	7	2632	2	001773	6 0	770	14	924									
	184	4	OBS	0308	0936	340	067	2635	,				14	919									
			STO	0400	0773	340	01	2656)	001552	0 0	936	14	871									
	184	4	OBS	10412	0753			2658						866									
			STD	0500	0605			2679		001334		080		822									
			STD	0600	0483			2696		001163	2 1	205		789									
	184	4	085	0615	0469		064	2699		001037	1. 3	215		786 785									
			STD	0700	0429			2711		001027		315 412		787									
	18	/.	STD	0800 T0814	0388		278	2724		000911	0 1	712		788									
	10.	4	STD	0900	0372			2732		000837	5 1	499		797									
			STO	1000	0353			2739		0000771		580		806									
	18	4	085	T1015	0350		430	2741		000		- 0 0		807									
			570	1100	0334			2746		000712	6 1	654		816									
			STD	1200	0316		52	275		000669		723		825									
			STD	1300	0298	345	55	2755	5	000632	7 1	788	14	835									
			STD	1400	0280			2758		000603		350		844									
			STD	1500	0262			2760		000587	9 1	909		853									
	18	4	OBS	T1528	0257	34!	572	2760)				14	856									

Т	IO. NO.	COOE	LATITUO	/10 LO	NOLL OR IT	MARSO SOUA	RE	STATION (GM:	r)	YEAR	C RUIS		TATIO	N	DEPTH TO BOTTON	MAX DEPTI OF S'MPL	H OB	WAVE SERVATION PER		WEA- THER COOE	CLOUD		\$1	ATION UMBER	
+-	-	PW									1	+		-			1	1	36.0			1		-	
τĺΥ	142	PW [30037	W Ir	+0007W	123	00 WAT	08 01	19		NO.	AIR TEN			4297	15	14	01	1		7 2	1		0010	
						-		_	WING	BAR				VIS.	NO.		ECIAL								
						1	CODE	TRANS. DIE	₹.]	OR (mb		ORY BULB	BUL		DEPTHS	OBSER	VATIONS								
						-		1.		06 23	0	239	21	1 7	14	 									
	-													-1	<u> </u>	L							·		7
		MESSENGR	CAST	CARD	OEPTH (m)	Т	℃	5 %.		SIGMA-T	SPECIF	WALY-XI	u €	₹ ∆ O		UNO	02 ml/	POan		OTAL-P	NO2-N	NO3-N	SI O 4-Si	ρН	C
		HR 1/10	140.	ITPE							ANO			x 10 ³	VEL	OCITY		μg - 0	171 1	rg = at/1	µg = a1/l	μg - α1/l	yg = al/		C
			İ																						
			•	STD	0000	2]	60	3473		2414	00	3783	5	0000	15	261									
		195		085	0000	2]	160	3472	В.	2414					15	261									
				STD	0010		40	3472		2419	0.0	3743	3	0038		257									
		195		OBS	0010		140	3471		2419						257									
				STD	0020		137	3493		2436		3583		0074		260									
		105		STD	0030		133	3502		2444	00	3513	2	0110		262									
		195		085	0030		133	3501		2444	0.0	0100	,	0174		262									
		195		STD	0050		917 917	3480		2484	00	3133	Ţ	0176		204									
		190		STD	0075		741	3459		2484 2512	00	2875	_	0251		204									
		195		OBS	0076		737	3458		2512	00	2015	7	0251		154									
		1//		STD	0100		700	3461		2523	0.0	2778	6	0322		147									
		195		085	0101		98	3460		2524				0 - 2 2		147									
				STD	0125		10	3446		2533	00	2692	0	0390		122									
				STD	0150	14	99	3432		2547		2563		0456		090									
		195		085	0154	14	80	3429	6 .	2549					15	084									
				STD	0200		210	3407		2587	00	2189	8	0575		999									
		195		OBS	T0207		176	3405		2592						988									
				STO	0250		58	3406		2614		1940		0678		954									
		105		STD	0300		936	3406		2635	0.0	1745	3	0770		917									
		195		OBS	0309		16	3406		2638		1 5 2 0	,	0004		911									
		105		STD	0400		746	3400		2659	00	1520	4	0934		861									
		195		OBS STD	T0411 0500		728 599	3399		2661 2679	0.0	1333	n	1076		856									
				STO	0600		491	3404		2679		1180		1202		792									
		195		085	0616	-	777	3405		2697	00	1100	,	1202		789									
				STD	0700		+36	3415		2709	0.0	1043	0	1313		788									
				STO	0800		397	3425		2722		0932		1412		789									
		195		OBS	T0816		392	3426		2723			_			790									
				STD	0900	03	375	3435		2732	00	0841	0	1501		798									
				STD	1000	03	356	3442		2739	00	0775	0	1581	14	807									
		195		OBS	T1014		353	3443		2740					14	809									
				STD	1100		337	3446		2744		0733		1657		817									
				STO	1200		318	3448		2748		0698		1728		826									
				STD	1300		300	3451		2752		0664		1797		835									
				STD	1400		282	3454		2755		0629		1861		844									
		10-		STO	1500		264	3456		2759	0.0	0594	6	1923		854									
		195		OBS	T1525	0.2	260	3457	T	2760					1.4	856									

REFERENCE	SHIP			NGITUDE ALOO	MARSOE	4	STATION T			ORIGINA	ATOR'S		EPIN DI	AAX. EPTH		WAVE	W EA-	CLOUD			1000	
CTRY ID.	CODE	LATITUDE	/10 LO	HGITUDE NO	SOUARI	- 1	(GMT)		EAR		TATION		10	OF MPL'S		RVATIONS	CODE	TYPE AM			LATION	
311142	PW					0 0			967			1.		15					1			
31 1142	PW	3004	M Ic	+002 W	125	WATER		MIND		A ID TEA				15	13	1	1	3 2	1	- 1	0011	1
					CC	LOR 1		SPEED	METE	D-		nos c	NO. D8S. 08	SPECIA								
					CC	OE	tm1 Olk.	FORCE	(mbs	s) BUL9	BULB	OE	PTHS									
							09	S05	23	4 256	222	7 1	14									
	MESSENGR	CAST	CARD	DEPTH (m)	T *C		s */	SIGMA	Ţ	SPECIFIC VOLU	ME & A	0	GNUOZ	, ,	2 ml/1	PO ₄ -P	TOTAL-P	NO2-N	NO3-N	St O4-5		5
	HR 1/10	약 NO.	TYPE	Derin (m)	, ,	- 1	,	316 M		ANOMALY-X10	X 1	03.	VELOCIT	[A] Q	2 1117/	μg - a+/l	μg - α1/I	μg = ot/l	μg - σ1/1	yg = a1/1	pН	č
	1	* 1	STO	0000	217	5	3477	241	3	003795	6 000	00 '	1526	5		1						
	192	2	OBS	0000	21		34766	241					1526									
		_	STD	0010	214		3478	242		003702	7 00:	37	1525									
	192	2	OBS STD	0010	214		34783 3510	242		003492	1 00	7 3	1525									
			SID	0020	215		3525	244		003492		-	1526 1527									
	192		085	0031	215		35261	245		003.02	7 021	, ,	1527									
			STO	0050	202		3506	247		003212	6 01	74	1523									
	197	2	085	0051	201	7	35050	247	7				1523	5								
			STD	0075	177		3468	251		002877	5 02	50	1516	5								
	192	2	OBS	0076	176		34671	251					1516									
	1.0		STD	0100	172		3469	252		002783	7 03	21	1515									
	197	_	OBS STD	0102 0125	172		34693 3462			003774	6 03	20	1515									
			STD	0150	159		3449	252 254		002726			1514									
	197	2	085	0154	15		34466	254		002034	0 04	, ,	1511									
			STD	0200	128	3	3407	257		002326	7 05	3 1	1502									
	192	2	085	T0209	123		34022	257	8				1500	9								
			STD	0250	109		3404	260		002010			1496									
	10		SID	0300	094		3406	263		001761	7 07	34	1492									
	197	۷.	OBS STD	0308	092		34058 3400	263 265		001526	9 094	. 0	1491									
	19:		0BS	T0408	073		33992	266		001220	9 0).	+0	1485									
	~ - 1	-	STD	0500	059		3400	267		001327	4 10	91	1481									
			STO	0600	048	2	3405	269		001162			1478									
	192	2	OBS	0612	04	1	34062	269	9				1478	6								
			STO	0700	0 4 2		3417	271		001019			1478									
			SID	0800	039		3427	272		000910	5 147	21	1478									
	197	2	085	T0811	038		34279			00000	2 15.		1478	_								
			SID	0900 1000	03		3435 3442	273		000836	_		1479									
	197	2	085	T1010	035		34425			000110	7 10	57	1480									
			STD	1100	03:		3445	274		000733	6 100	54	1481									
			STD	1200	03		3448	274		000699			1482									
			SID	1300	029		3451	275		000664) 4	1483									
			SID	1400	028		3453	275		000629			1484									
			STD	1500	026		3456	275		000594	9 193	29	1485									
	19	2	OBS	T1516	026	0	34566	276	0				1485	5								

REFER	ENCE	SHIP			. =	MARS	DEN	STATION TO				DRIGIN	ATOR'S		OEPTH	MAX.		W	N V E	WEA				NODC	
CTRY	.01	CODE	LATITU		LONGITUDE			(GMT)		YEAR	CRUISE		TATION		BOTTOM	OF			ATIONS	THER CODI				TATION	
-	NO.			1/10	1/10	10"		MO DAY H			NO.	<u></u>	NU MBER		00710111	S'MPL'	S DIR	HG	T PER SE	A 000	TYPE AN				
31	1142	2 PW	2828	N	14003 W	087			003 1	1967	N09	01	2		4755	13	11	1			6 5			0012	
							WAT	ER V	/IND	BARG) - A	AIR TEA	MP. °C	vis.	NO.	SPE	CIAL								
							COLOR	TRANS. DIR.	SPEED	METI		ULB	BULB	COD	DEPTHS		/ATIONS	2							
							CODE		FORCE	+		_		+-				-							
				,				09	508	23	1 2	33	211	_	13			1.,			1-		1		
		MESSENG	CAST NO.	CARI		T	"C	s */	SIGN	1-A	SPECIFIC		ME 07	YN. M	. SOL	DOLLA	O ₂ ml.		PO ₄ -P	TOTAL-P		NO3-N	\$104-5		Š
		HR 1/10)	1111										x 10 ³	4650	20111		'	rg = 01/1	ا/Io - ور	μg - σ1/1	μg - ot/l	kg + ol/	-	-
																						1			11
				ST			227	3525	24:		003	582	3 0	000		284									
		00		083			227	35253	241							284									
		00	3	OBS			200	35248	244							279									
				ST			196	3525	244			508		035		278									
		00	2	ST			152 124	3523 35214	24!		003	409	0 (070		268									
		00	2	085 51			116	35214	246		003	330	7 0	104		261 260									
		00	3	0BS			054	35166	24		003	330	1	1104		245									
		00	_	ST			019	3512	241		003	154	.0 0	169		236									
		00	3	089			900	34999	250		000		•	-0,		205									
			_	S1			890	3500	250		002	930	1 0	245		203									
		00	3	089	0092	1	866	35007	25	13					15	199									
				ST			861	3501	25		002	861	6 0	317		199									
				51	D 0125	1	845	3501	25			828		388		198									
		0.0	3	085	0140	1	835	35016	25	22					15	198									
				51	D 0150	1	782	3492	25	27	002	755	7 0	458	3 15	183									
				51	0 0200	1	532	3453	25	56	002	494	5 0	589	15	111									
				51			310	3426	251	8 2	002	252	4 0	708	3 15	044									
		00	3	089			195	34156	25							008									
			_	51			116	3413	260		001	999	0 0	814		983									
		0.0	3	OBS			965	34089	26		0.01	, , , ,				936									
				\$1			870	3407	26			655		997		909									
		00	2	S1 0B5			718 656	3403 34011	26		001	473	0]	153		867 850									
		00	2	51			614	3406	261		0.0.1	321	0 1	293		843									
				51			541	3416	26			164		417		831									
		00	3	0B3		U	741	34174	20	70	001	104		1 T I	T -4	0 1									
		- 00		51		٥	478	3425	27	13	0.01	029	2 1	527	7 14	823									
		00	3	085			432	34314	27.		001	727	_ 1			819									
		- 00		51			425	3432	27		000	1922	2 1	625		818									
				51			382	3439	27			827		712		818									
				51			349	3444	27			759		792		821									
				51		0	326	3449	27	48		703		865	14	829									
		00	3	OBS			314	34517	27							840									

REFERENCE	SNIP				MARSDEN	STATIO	IN TIME			ORIGH	ATOR'	5	DEPTH	MAX		WA		WEA-	CLDUD			NODC	
CTRY ID.	CODE	LATITU	1/10 L	ONGITUDE 1/10	SOUARE		MT) (Y [HR,1/1	YE.A	AR C		STATIC		BOTTO	1.01	00		ATIONS	THER	CODES			NOITATZ	
311142	PW	2831		40070W	087 8				67				471				FER J SE			1			
1 21/1142	i ca l	2031	. N 1	-400 / OW		VATER	WIND			NO9 01			471	T				1	7 6	1		0013	l
					COL		DIR. SPI	ED A	BARO- METER	DRY	WE	T COD	E 083.	DOSCO	ECIAL VATIONS								
					co	DE IMI	FO	RCE	(mbs)	BULB	BUL	.В	DEPTH	2									
		,					08 51	. 0	264	239	21	7 7	14			L							
	MESSENGR TIME	CAST	CARD	DEPTH Imi	r *c	s -	/. 5	IGMA-		PECIFIC VOL		₹ △ D	Sc	DUND	O 2 ml/	, Р	O4-P	TOTAL-P	NO2-N	NO3-N	5104-		5
	HR 1/10	NO.	TYPE					-		ANOMALY-X	10'	x 10 ³	., VE	LOCITY	02 11117	וע	g = 01/i	νg - α!/l	µg = a1/	µg - a1/	µg - al.	п рн	C
						- 1	i																\Box
			STO		219			446		003480	2	0000		5275									
	202		OBS OBS	0000	219		-	446						5275									
	202	2	STE		218 218			447		003462	0	0035		5275 5275									
			STO		216			454		003402		0069		5272									
	202	2	085	0029	215			459			_			5269									
			STO	0030	214	9 352	8 2	459		003365	2	0103		5269									
	202	2	085	0047	212			465						5265									
	20-		STE		209			470		003266	4	0169		5257									
	202	-	OBS	0073	193 193			501		00297	, 1	0247		5217 5215									
	202	2	085	0092	188			510		00291	1	024		5205									
			STO		188			511		002898	0	0321		5205									
			STE		185	5 350		517		002844		0393	3 1	5202									
	202	-	OBS	0139	183		_	523						5197									
	202	,	STC OBS	0150 T0185	180 170			525		002780	16	0463		5191									
	202		STO		160			536		002558	1	0596		5165 5135									
			STO		132			584		002235		0716		5048									
	202	2	OBS	0280	118	341	70 2	599						5005									
			STD		112			608		002009	7	0822		4988									
	202	2	085	10373	093			636						4931									
			STO		087			646		001654		1005		4912 4855									
	202)	OBS	0558	060			681		001400	1	1130		4831									
			STD		057			689		001244	5	1291		4826									
			STO	0700	050	342	0 2	706		001088		1408		4816									
	202	-	OBS	T0740	048			711						4814									
			STD		045			719		000970		1511		4813									
	20-	,	STD		041			729		000878	2	1603		4814									
	202		085 ST0	0926	040			731		000799	6	1687		4814									
			STE		034			744		000735		1764		4816 4821									
			STO		032		_	750		000682		1834		4827									
			STO		030.	2 345		753		000652		1901		4836									
	2.6		STE		028			755		000633	4	1965		4847									
	202	2	OBS	T1426	028	4 345	42 2	756					14	4850									

REFERENCE	SHIP	LATITU	05	LONGITUO	-	× M	ARSOEN QUARE	STATION	TIME	VF AB			ATOR'S		OEPTH	M AX.			VE	WE					ноос	1
CODE NO.	CODE	LATITU	1/10		1/10	Si Si		MO DAY		YEAR	CRUISE NO.		TATION	-	TO 80TTOM	0.0			F PER S	COL					TATION	
311142	PW	2831	-	14003	-	0.8		08 05		1967	-	01		_	4663	1			1111	-	6				001/	
1 21/1142	1 . 4 1	2031		14003	71	100		TER	WINO				AP. °C	1		14	0 9	714	(- 1	10,	€ 1		1	0014	*
							COLO	7	59EE	D MET	0-	RY	WET	CODE	NO,		CIAL	s								
							CODE	(m)	R. OR		s) BL) LB	BULB		DEPTHS											
								0	6 S1	0 26	4 2:	39	206	7	14			1								
	MESSENGR	CAST	CARO	5 50	714 /-		7 °C	/			SPECIFIC	VOLU	ME S	A D	sou	UND	0. 1		PO4-P	TOTAL-	P NO2-	N N	103-N	SI 04-Si		
	HR 1/10	NO.	TYPE	OEF	PTH (m)	' .	, ,	s */.	. 210	SMA-T	ANOMA	LEY-X11	0'	τΝ, Μ. χ 10 ³	, AEFC	OCITY	O2 ml.		19 - 01/1	µg = 01/			g - ol/i	µg = el/l	PH	
																		_			1					
	1	' 1	ST	D 0	000		2179	3526	2	449	003	448	3 0	000	15	272		- 1		ı	1	,	,		1	
	197	7	085	0	000		2179	3526	1 2	449						272										
	197	7	085	-	008		2172	3525	9 2	451					15	271										
			ST	-	010		2169	3526		452	003			034		271										
			ST		020		2154	3525		455	003			069		269										
	10-		ST		030		2134	3523		460	003	361	1 0	102		265										
	197		085		030		2134	3523		460						265										
	197	(085 ST		045		2095	3523 3517		471 477	003	20%	2 0	168		257										
	197	7	085		070		1930	3501		498	003	204	<i>5</i> 0	100		246										
	7 7 1	'	ST		075		1918	3502		501	002	986	8 0	245		211										
	197	7	085		092		1880	3500		510	002	, , ,		- , ,		203										
			ST	0 0	100		1870	3500		512	002	889	5 0	319		201										
			ST	D 0	125		1832	3498	2	520	002	822	1 0	390	15	194										
	197	7	085		136		1811	3497	1 2	524					15	190										
			ST		150		1789	3493		526	002	764	8 0	460		185										
	197	7	OBS		183		1699	3478		537				c		162										
			51		200		1582	3462		552	002			593		128										
	197	,	ST		250		1298 1217	3427 3419		585	002	221	8 0	712		040										
	197		0BS		268 300		1131	3419		595 609	002	003	7 0	817		014										
	197	7	OBS		361		0979	3410		631	002	000	, 0	011		944										
	'		ST		400		0879	3409		646	001	655	4 1	000		913										
			ST		500		0675	3404		672	001			153		850										
	197	7	085	0	533		0625	3402	8 2	677					14	835										
			ST	D 0	600		0572	3409	2	689	001	244	5 1	286	14	826										
			ST		700		0507	3419	_	705	001	099	2 1	403	14	817										
	197	7	085		710		0501	3419		706						817										
			ST		800		0463	3428		717	000	988	5 1	507		817										
	197	1	OBS		899		0425	3435	_	727	000	000		603		819										
			ST		900		0425	3436 3442		727	000			601		819										
			ST ST		100		0359	3442	_	736 743	000			687 765		822										
			ST		200		0332	3451	_	749	000			837		832										
			ST		300		0309	3453		7 52	000			905		839										

FERENC Y ID	SHIP	LA TITU	DE L	ONGITUDE 1/10	MARSDEN SOUARE	STATION TIN	YEAR		ATOR'S TATION IUMBER		EPTH DEPTH	OBS	WAVE SERVATIONS	WEA- THER CODE	CLDUD CODES		2.	NODC TATION UMBER	
111	42 PW	3012		4008 W			91 1967	N09 01	5	1.		-	2		8 3			0016	
1111	+2 PW	3012	. 14 T	4000 W	123 00 WA1		IND	A ID TE							013	1	1	0015	
					-		SPEED AAFTI)- <u> </u>		VIS.	JBJ. mnren	CIAL VATIONS							
					CODE	IRANS. DIR.	FORCE (mbs		BULB	DE	EPTHS OBSER	7 110143							
						06	510 24	0 239	217	7	14								
	MESSEN	11			<u> </u>			SPECIFIC VOLU	\$ /	D	SOUND		PO4-P	TOTAL-P	ND. N	ND N	110 1		5
	TIME	of ND.	ÇARD TYPE	DEPTH (m)	T °C	5 %.	SIGMA-T	ANOMALY-XI		. M.	VELDCITY	D2 ml/l	µg + al. I	μg + α1/I	ND2-N μg - αt/1	ND3-N µg - at/l	S1 D4-S+ µg - 01/1	ρН	00
	HR 1/1	0								-			1						-
	1	1		0000	2104	3481	24.13	002017	1 00	00	15271		1						
	19	0.1	STD OBS	0000	2194 2194	34806	2411 2411	003817	1 00	00	15271								
	1:	, 1	STO		2190	3480	2412	003811	6 00	38	15271								
	19	91	OBS	0010	2190	34804	2412				15271								
			STE		2154	3480	2422	003720	1 00	76	15263								
			STO	0030	2089	3480	2439	003554	4 01	12	15248								
	19	91	OBS	0034	2054	34804	2449				15239								
			STE	0050	1850	3465	2490	003079	4 01	79	15183								
	19	91	085	0053	1823	34629	2495				15176								
			STD	0.75	1756	3468	2515	002845	0 02	53	15160								
	19	91	OBS	0081	1740	34682	2519				15157								
			STO	0100	1700	3466	2527	002739	4 03	22	15148								
	19	91	OBS	0105	1684	34646	2530				15144								
			STE		1557	3442	2542	002606		89	15105								
			STD		1412	3421	2557	002464	6 04	53	1506C								
	19	91	OBS	0157	1374	34168	2562				15049								
	7.0		ST		1167	3403	2592	002140	7 05	68	14984								
	19	/ 1	085	T0209 0250	1132	34009	2597	001024	. 06	70	14973								
			STO		1047 0948	3434	2614	001934		70	14949								
	2.0	2.7	STO	0300	0948	3406	2633	001766	0 07	62	14922								
	19	7 1	OBS STO		0765	34061 3400	2637 2656	001547	0 00	28	14915								
	2.0	7.7	085	T0422	0729	33993		001547	0 09	20	14858								
	10	* 1	STE		0640	3400	2661 2673	001388	0 10	75	14836								
			STO		0542	3404	2689	001243		06	14813								
	19	2.1	0BS	0625	0) 4 2	34059	2009	001243	_ 14	00	. 7013								
	1	, 1	STO		0465	3415	2706	001077	4 13	22	14800								
			ST		0407	3425	2720	000943		23	14793								
	19	91	OBS	T0833	0392	34285	2725				14793								
			STO		0377	3434	2731	000850	7 15	13	14799								
			STE		0356	3442	2739	000775	0 15	94	14807								
	11	91	OBS	T1042	0348	34442	2742				14811								
			STO	1100	0337	3446	2744	000733	8 16	70	14817								
			STO	1200	0318	3448	2748	000701	0 17	41	14825								
			STO	1300	0300	3450	2751	000668	9 18	10	14835								
			STO	1400	0283	3453	2755	000637	6 18	75	14845								
			STO	1500	0267	3455	2758	000606	9 19	37	14855								
	1	91	085	T1582	0255	34572	2761				14864								

IO.	SHIP	LATITU	OE	LONGITUOE 1/10	MAR SOU	SDEN JARE	STATE	ON THE	Y	EAR	CRUISE NO.		TOR'S ATION	V	DEPTH TO BOTTOM	MAX. OEPTH OF S'MPL'S		WAVE SERVATION	WEA THER CODE	COOES	5	S.	NODC TATION UMBER
		2 + 4 2			1									-									
142	PW	3002	N	14006 W	123					967					4572	15	08	11		6 2			0016
						WA		W	IND	BARC)	IR TEM		vis.	NO.	SPE	CIAL						
						COLOR	TRANS.	OIR.	SPEED	AMETE (mbs		ULB	BULB	CODE	DEPTHS	OBSERV	ATIONS						
								0.5	FORCE	-		-		_	2.4			-					
_					-,	<u> </u>		05	508	28	1 2	56	23		14							_	_
ı	MESSENGR	CAST	CARD	OEPTH (m)	1	°C	,	•/	SIGMA	T	SPECIFIC	VOLUM	E :	₹ A D	501	ONL	O2 ml/	PO4-P	TOTAL-P		NO3-N	5104-51	pН
	TIME (NO.	TYPE	00.771			*		3101111		ANOM	ALY-X10 ³	´ [`	x 10 ³	VELO	CITY	01	pg = 01/1	µg • 01/1	ug = 01/1	µg = 01/1	µg ≈ a1/1	,,,,
			ST	0 0000	2	230	350	9	242	2	003	7082	, ,	0000	1 15	283		1	1		1	1	
	188	3	OBS			230	350		242		002	1002	. '	0000		283							
	100	•	ST			224	35		242		003	6777	7 (0037		283							
	188	3	085			224	35		242							283							
			ST			216	350		242		003	7358	3 (0074		282							
			ST	0 0030	2	208	349	92	241	5	003	7831	L (0112	15	280							
	188	3	055	0030	2	208																	
	188	3	085	0049	1	834	34	780	250	4					15	180							
			ST) 0050	1	1832	34	77	250	4	002	9495	5 (0179	15	180							
	188	3	085	0074	1	771	346	661	251	0					15	165							
			ST	0075	1	767	346	57	251	2	002	8778	3 (0452	15	164							
	188	3	088	0098			346	591															
			ST	0100	1	675	346	57	253	4	002	6757	7 1	0321	15	140							
			ST	0125	1	1573	340	+4	254	0	002	6261	l I	0387	15	110							
			ST	D 0150	1	461	34	26	255	0	002	5310) (0452	15	077							
	188	3	065	0150	1	1461	34	256	255	0					15	077							
			ST			1206	340		258		002	2191	l I	0571		997							
	188	3	085			198		12	258							995							
			ST			1066	340		261			9676		0675		956							
			ST			950	340		263		001	764]	L I	0769		923							
	188	3	OBS			946		968	263			_				922							
			ST			784	340		265		001	5681	L	0935		876							
	188	3	085			776		005	265							873							
			ST			613	340		267			3373		1081		825							
		_	ST)490	340		269		001	1820)	1206		792							
	188	3	085)485		37	269		1	0501				791							
			ST)436	34		270			0504		1318		787							
	2.0		ST			395	34		272		000	9299	1	1417		788							
	188	3	OBS			394		251	272		000	91.63		1506		789							
			ST			373	34:		273 274			7704		1587		797							
	100	9	ST			352		424 424	274		000	1102	4	1701		807							
	188	0	085 ST			332	34		274		000	7339	2	1062		814							
						314	344		274			7001		1734		824							
			ST			296	34	-	275			6650		1802		833							
			ST ST			279	345		275			6314		1002		843							
						263	34		275			5986		1928		853							
	180	0	ST			0262		559	275		000	7700	,	1720		854							
	188	3	085	T1507		1202	54	777	215	7					14	0.24							

REFERENCE	SHIP			<u> </u>	MAR	NEOE	STATION T				NATOR	'S	OEPTH	MAX.	One	WAVE ERVATIONS	WEA-	CLOUD	-		NODC	
CTRY ID.	CODE	LATITU	DE LC	NGITUDE 5	10*	ARE	(GMT)		YEAR	CRUISE NO.	STATIO		BOTTOM	0.0	003	HGT PER S	CODE	TYPE AM	1		STATION NUMBER	
311142	PW	3021		40105W	123	+		 	967	N09 0	1 7		4352	15		3		8 2			0017	
	1				1	WAT		VIND	BARC	A IP T	MP. "C	: [NO.	1		- 1 1	'			,	0011	
							TRANS. DIR.	SPEED	METE	R DRY	WE		0.05		CIAL /ATIONS							
						CODE	Im1 DIN	FORCE	(mbs		-	_										
				_		ll	04	506	27	4 250	2 1		14	L		,	-					_
	MESSENGR TIME	CAST	CARD	DEPTH (m)	т	°C	5 %.	SIGM	A-T	SPECIFIC VOL		Z ∆ D	sol	QNU	02 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	SI O4-		S
	HR 1/10	NO.	TYPE							ANOMALT	110	x 103	VEL	OCITY		μg • at/l	yg - a1/1	μg - 01/1	yg - 01/1	μg − o1	/	c
					İ																	
	'		STD	0000		223	3487	240		00385	12	0000		279								
	183	3	085	0000		223	34866	240			_			279								
			STD	0010		215	3487	240		00383	27	0038		278								
	183	3	OBS	0010		215	34867	240		00220	3.5	0076		278								
	101		STO	0020	2	077	3498 34981	245	0.6	00339	25	0075	10	245								
	183	,	08S ST0	0030	1	961	3496	24.5		00311	7 7	0107	15	215								
	183	1	085	0049		806	34641	248		00311	1 1	010		170								
	10.	,	STO	0050		803	3464	250		00297	54	0168		170								
	183	1	OBS	0073		729	34622	251		00271	, ,	0.00		151								
	10.	,	STD	0075		722	3465	252		00278	8.8	0240		150								
	183	3	OBS	0098		7410		252		002.0		0 =	, -,									
	10,		STD	0100		633	3476	255		00251	56	0306	. 15	129								
			STO	0125		535	3446	255		00253		0369		099								
	183	3	085	0149		432	34241	255			•			067								
			SID	0150	1	426	3423	255	6	00247	83	0432	15	065								
			STD	0200]	183	3400	258	36	00219	17	0549	14	989								
	183	3	085	T0201	1	179	33999	258	37				14	988								
			STD	0250		095	3409	261		00198	03	0653		967								
	183	3	085	0297		006	34120	262						943								
			STD	0300		1999	3412	262		00180	54	0748		941								
	183	3	085	T0394		799	34011	265						881								
			STD	0400		787	3401	265		00157	_	0917		877								
	183	,	STD	0500 0590		617	3402 34023	267		00134	48	1062		827								
	10:	,	STD	0600		500	3404	269		00119	1 2	1189		796								
			STO	0700		1440	3416	271		00104		1301		789								
	183	a	085	T0781		406	34248	272		00104	0 2	1501		790								
			STD	0800		403	3427	272		00092	44	1399		792								
			STD	0900		388	3437	273		00084		148		804								
	183	3	085	T0979		375	34430	273						812								
			STD	1000		371	3444	273		00078	14	1568		814								
			STD	1100	(353	3446	274	43	00074	88	1645	14	823								
			STD	1200	(333	3449	274	+7	00071	34	1718	3 14	832								
			STD	1300	(311	3451	275	51	00067	52	1788	3 14	840								
			STD	1400		287	3454	275	55	00063	49	1853	14	847								
	181	3	OBS	T1468	C	270	34556	275	8 5				14	851								

ENCE	ZHIP	LATITU	D5	LON	GITUDE		RSDEN	STATION IGA		YEAR		ORIGINA			DEPTH TO	MAX		WAVE	ONS	WEA-	CLOUD			NODC	
NO.	CODE		1/10		1/10	à 2 10°		MD DAY			CRUIS NO.	E S1	TATION		BOTTOM	S'MPL		HGT PE		CDDE	TYPE A M			UMBER	
	-	2000		2		-			-	1	_										1				
1142	PW	3003	N J	140	004 W	12	-	08 09	184	196	NO	9 018			4755	15	03	1 1 1	1	1	8 2		- 1	0018	
							WAI		WIND	ED BAI		AIR TEM	-	VIS.	ND. 085.	SPE	ECIAL								
							COLOR	TRANS. DI	L O	R total		BULB	W ÉT BULB	CODE	DEPTHS	OBSER	VATIONS								
							_	0			. 7	250	228	7	14										
								1	7 30	0 2.	, , ,	200		1 .										г	\neg
	MESSENGE	CAST NO.	CAR	D	DEPTH I	n I	T °C	s ./	. SI	GMA-T		MALY-110	ME S	Δ D.	501	DNU	O2 ml/	1 PO4		OTA L-P		ND3-N	\$104-51	ρН	c
	HR 3/10		TYPE	i							ANO	W X (1-210		(103	AFEC	OCITY		78 -	et/I	υg = e1/l	1/10 - gu	µg = a1/1	µg = a1/1		C
			์ รา	rp '	0000) '	2284	3540	2	430	00	36331	0 0	000	15	300									
	18	4	085	5	0000)	2284	3539	7 2	430					15	300									
			51	TD.	0010)	2274	3539	2	433	00	3612	4 0	036	15	299									
	18	4	089	5	0010)	2274	3539	3 2	433					15	299									
			S 1		0021		2140	3527		461		3346		071		265									
			\$1		003		2023	3511		480	0.0	3163	5 0	104	15	234									
	18	4	089	-	003			3511																	
			51		005		1839	3470		497	0.0	3014	7 0	165		181									
	18	4	083		005		1839	3470		497	0.0	2021	, ,	320		181									
	1.0	,	51		007		1705	3454		517	00	2831	6 0	238		144									
	18	4	085		007		1705	3453		517	0.0	7722	2 0	300		144									
	1.0	,	S1		010		1688	3463		528	00	2733	3 0	308		144									
	18	44	083		010		1688	3463 3457		528	0.0	2713	7 0	376		137									
			S1 S1		015		1574	3446		541		2621		443		115									
	18	1.	0B9		015		1565	3444		542	00	2021	1 0	747		112									
	10	-4	51		020		1244	3407		580	0.0	2252	9 0	565		011									
	18	4	083		T020		1217	3404		583				- 0,5		002									
			51		025		1093	3406		608	00	1998	9 0	671	14	966									
			51		030		0970	3408		631	00	1784	8 0	766	14	930									
	18	4	089	5	030	5	0959	3408	5 2	633					14	927									
			51	TD	040	0	0778	3401		655	00	1559	3 0	933		873									
	18	4	083	S	T040		0762	3400		2657						869									
			Si		050		0615	3402		678		1340		078		826									
			s.		060		0496	3404		694	00	1189	3 1	204		794									
	18	4	083		061		0487	3403		2695						792									
				TΩ	070		0438	3415		709		1045		316		788									
				TD	080		0397	3425		2722	0.0	0932	2 1	415		789									
	18	4	085		T080		0395	3425		2722						789									
				TD	090		0377	3434		2731		0850		504		799									
				TD	100		0358	3441		2738	00	0784	/ 1	586		808									
	18	4	08S 101 STD 110				0355	3441		2730	0.0	07//	c ,	613		809									
							0339	3444		2743 2747		0746		662 735		817									
				TD TD	120			3447				0672		804		835									
				TD TD	130 140		0301	3450 3453		2751 2755		0634		869		844									
				TO	150		0262	3456		2759		0594		931		853									
	1.0				T151		0259	3456		2760	00	0274	- 1	,,,,,		855									
	18	-4	OB:	3	1121	U	0229	2470	0 4	. 100						.000									

	ATITUDE	TONGITUDE TAN	MARSDEN	STATION T	IME YEAR	DRIGINAT	DR'S	DEFIN DE	AX.	WAVE	WEA	CLOUD	T		NODC	
COOE NO. CODE	1/10	LONGITUDE 1/10	10° 1°	MD DAY H	1		MBER	ODTTOM C	PL"S DIR.	HGT PER S	THER	CODES			STATION	
31 1142 PW 3	005 N	13959 W	122 09	08 10	195 196	7 NO9 019			5 06	2	^	7 2	1			
			WA		VIND	412.75.44		LNO		1511	1	1 112	1	- 1	0019	
			COLOR	TRANS. DIR.	SPEED AMET OR (mb		WET COD	DEPTHS OBS	PECIAL RVATIONS							
				03	507 24		228 7	14								
MESSENGR	AST CARE	,					_		!							
HR 1/10	O. TYPE		1 ,0	s °/	SIGMA-T	ANOMALY-X107	₹ △ D DYN. M X 10 ³	. AEFOCITA 200ND	0 2 ml/l	PO4-P pg = at/1	TOTAL -P	NO2-N	ND3-N	S1 D4-S		5
						 	A 10	-	-		P 4 1.77	pg - 6071	µg = al/l	hå - 01/	-	C
	ST		2297	3541	2427	0036600	0000	15304				1				
195	085		2297	35409	2427	002000	0000	15304								
105	ST		2288	3541	2430	0036413	0037									
195	OBS		2288	35406	2430			15303								
	ST ST		2284	3537	2428	0036573	0073	15303								
195	085		2228	3534	2442	0035328	0109	15290								
175	ST		2228 1962	35341 3500	2442			15290								
195	OBS		1962	35002	2488	0030967	0175	15219								
	ST		1809	3491	2488 2520	0027995	0440	15219								
195	095	0075	1809	34913	2520	0021995	0249	15179								
	ST	0100	1758	3498	2538	0026384	0317	15179 15169								
195	085	0100		34981		0020304	0517	10109								
	STI		1706	3493	2546	0025656	0382	15157								
105	ST		1655	3477	2546	0025739	0446	15144								
195	OBS	0152	1651	34753	2546			15143								
195	ST		1238	3409	2583	0022270	0566	15009								
190	03s STI	T0203 0250	1219	34060	2584			15003								
	511		1126 1020	3407 3407	2602	0020525	0673	14978								
195	085	0306	1007	34074	2621 2624	0018750	0771	14948								
	SI		0786	3401	2654	0015711	00	14945								
195	085	T0410	0766	34001	2656	0015711	0944	14876								
	STO	0500	0614	3402	2678	0013387	10.00	14870								
	STE	0600	0491	3404	2695	0011795	1089	14826								
195	085	0612	0480	34044	2696	0011193	1415	14792								
	STO		0437	3414	2709	0010516	1327	14788								
	STO		0398	3425	2721	0009334	1426	14790								
195	OBS	T0816	0393	34261	2723			14790								
	STE		0375	3433	2730	0008558	1515	14798								
195	STD		0353	3441	2739	0007789	1597	14806								
190	08s ST0	T1017	0350	34420	2740			14808								
	STD		0334	3444	2743	0007392	1673	14815								
	STO		0315 0297	3447 3450	2747	0007034	1745	14824								
	STO		0280	3453	2751	0006676	1814	14834								
	STO		0264	3456	2755 2759	0006333	1879	14843								
195	OBS	T1523	0261	34564	2759	0005997	1940	14854								
					2 ())			14856								

																			_			
REFERENCE	SHIP			ACITUDE TOO	MARSOEN	STATION TIA		YEAP		RIGINAT			DEPTH	MAX. DEPTH	ORS	WAVE ERVATIONS	WEA-	CLOUG			NODC	
CTRY ID.	CODE	LATITU	1/10 LO	· 1/10		MO DAY HE		TEAP	CRUISE NO.		TION	- 1	BOTTOM	OF S'MPL"		HGT PER SEA	CODE	TYPE AMT			NUMBER	
	PW	3015		0055W				1967	N09	020		-	4663	44	08	2		7 3			0020	
31/1142	- W	3013	JN 14	003341	WAT		ND		- AI	R TEMP.	*0					- -	t .	1 (1)	1	1	0020	
					COLOR		SPEED	METE)- 			VIS.	NO. 085.	SPE OBSERV	CIAL							
					CODE	TRANS OIR	FORCE	(mbs		LB 8	BULB		SHT930	OBJEK								
						10	509	25	1 24	4	228	7	20									
	MESSENGI							1	SPECIFIC		≥ △ DYN		501	IND.		PO4-P	TOTAL-P	NO2-N	и0₃−и	SI O4-	ς,	5
	TIME	O' NO.	CARD	DEPTH (m)	1 10	5 %.	ZIGN	T-AA	ANOMA	LY-1107	DYN	. M.		CITY	O2 ml/l		1/10 - Qu	μg - σt/l	ug - 01/1	yg - 01		c
	HR 1/10				<u> </u>							10	+-			-				-		
	1	1	6.70	0000	2200	252/	2.6	2.	0036	722	00	00	16	301		1	-			1	1	11
	18	7	STD 08S	0000	2290 2290	3536 35364	24.		0036	0133	00	UU		301								
	10	1	STD	0010	2278	3536	24		0036	5457	00	37		300								
	18	7	085	0010	2278	35362	24			,				300								
			STD	0020	2152	3531	24		0033	3490	00	72	15	269								
	18	7	OBS	0029		35205																
			STD	0030	2041	3517	24		003	1665	01	04		239								
	18	7	085	0049	1875	34736	24				0.1			191								
		_	STD	0050	1869	3473	24		0031	0668	01	66		190 155								
	18	7	OBS STD	0074 0075	1743 1740	34585 3458	25 25		00.21	8809	0.2	41		155								
	18	7	085	0099	1661	34539	25		002		0-	* 1		134								
	10	1	STD	0100	1659	3454		27	002	7374	03	11		134								
			STD	0125	1601	3446	25		002	5694	03	79	15	119								
			STD	0150	1508	3439	25	50	002	5305	04	44	15	093								
	18	7	085	0150	1508	34391	25	50					15	093								
			STD	0200	1211	3403	-	83	002	2209	0 5	62		999								
	18	7	OBS	T0202	1201	34021		85						996								
			STD	0250	1072	3407		12		9551		67		959								
		_	STD	0300	0950	3408		34	001	7545	07	60		923								
	18	7	085 STD	0301	0948	34081 3401		34	001	5209	0.9	23		863								
	18	7	OBS	0400	0172	34010	20	77	001	2607	0 /			002								
	10		STD	0500	0597	3403	26	81	001	3083	10	65	14	819								
			STD	0600	0486	3405		96	001	1646	11	88		790								
	18	7	OBS	0604	0483	34054		97						790								
			STD	0700	0437	3415		09		0456		99		788								
			STD	0800	0399	3425		21	000	9375	13	398		790								
	18	7	085	T0802	0398 0376	34248		21	000	8495	1.6	87		790								
			STD	0900 1000	0355	3442		39		7738		69		807								
	18	7	STD OBS	71006	0354	34422		39	000					808								
	10		STD	1100	0333	3445		44	000	7336	16	544		815								
			STD	1200	0312	3448		48		6948		715		823								
			STD	1300	0293	3451		752	000	6578		783		832								
			STD	1400	0276	3454		756		6220		347		842								
			STD	1500	0262	3457		60	000	5901	. 19	908		853								
	18	7	OBS	T1504	0261	34568		60	000	E E 7 0	2.0	51		853								
	0.1	,	STD	1750	0238	3459		163 166	000	5578	3 20	, , ,		910								
	21	. 4	085 STD	1940 2000	0220	34606 3461		767	000	5231	21	186		917								
	21	4	085	T 2 3 5 5	0177	34646		773	000	1				963								
	2.1	. ~	STD	2500	0172	3465		773	000	4626	24	+33		985								
	21	. 4	OBS	T2870	0160	34664		775					15	0 44								
			STD	3000	0157	3467		776	000	4437	7 26	559		065								
	21	4	085	T3364	0150	34679		777				1.0		126								
			STD	4000	0152	3469		778	000	4500	3	106		239								
	21		085	4309	0153	34696		779						294								
	21	. 4	085	T4400	0152	34689	4	778					1:	1309								

REFERENCE			E E	MARSDEN	STATION TH		01	RIGINAT	OR*S		DEPTH	MAX, DEPTH	035	WAVE	SNC	WEA-	CLOUD		1	ATION
CTRY ID.	CODE LATE	-	ONGITUDE LANGE	SQUARE	(GMT)	YEAR	CRUISE NO.	STA	TION		TO BOTTOM	S'M PL'S		HGT FE		CDDE	TYPE AM		N	UMBER
CODE NO.		1/10	1/10		MO DAY HE		+			-		1			367					
311142	PW 300	6 N 1	3958 W		08 12 1			021	200		4755	15	08	11	1	1	7 7	t	- 1	0021
				WAI		SPEED BAR	Q-	R TEMP.		VIS,	ND, OBS,	SPEC	CIAL							
				COLOR	TRANS. DIR.	OR (mb			WET BULB	CODE	DEPTHS	DBSERV	ATIONS							
					02	509 25	_	2	211	7	14									
_					102	307 22	74 22		-		-		1				1			1
	MESSENGE CAS		DEPTH (m)	r *c	s */	SIGMA-T	SPECIFIC		DAY	A. D.	SOL	JNO	D2 ml/l	PO ₄		TOTAL-P	NO ₂ =N μg - αl/l	NO3-N µg - a1/1	SI D4⊷Si µg = ot/l	рН
	HR 1/10 NO.	TYPE							X	103	7			1 20 -	377		pg - ai,	pg - u// 1	79	
									1											
1	•	STD	0000	2229	3495	2412	0038	3059	0.0	000		281								
	188	085	0000	2229	34951	2412						281								
		SID	0010	2219	3495	2415	003	7806	0.0	38		280								
	188	085	0010	2219	34954	2415	003	1305	0.0	75		280								
		STD	0020	2217	3515	2430	0036	כטנכ	ÜÜ	75		284								
	188	085	0029	2216 2189	35167 3513	2432 2437	0031	5807	0.1	11		285								
		STO			34691		003.	7007	0 1	. 1.1		177								
	188	OBS	0049	1826 1822	34691	2499 2500	00.29	9839	0.1	177		176								
	188	STD OBS	0074	1756	34649	2513	002	,0,5,	0.2	. , ,		160								
	100	ST0		1756	3465	2513	002	8659	0.4	250		160								
	188	OBS	0098	1745	34747	2523						162								
		STO		1740	3475	2525	002	7653		320		161								
		STD		1657	3479	2547		5566		387		140								
		STD	0150	1546	3483	2576	002	2934	0.4	+47		111								
	188	085	0150	1546	34827	2576						111								
		STC		1231	3404	2580	002	2506	0:	61		006								
	188	OBS	T0202	1221	34020	2581	001	9849	0.4	667		961								
		STO		1079 0950	3405 3407	2609 2633		7589		761		923								
	1.0.0		0302	0945	34075	2634	001		~	, 0 2		921								
	188	OBS STE		0745	3400	2659	001	5183	09	924		861								
	188	085	0401	0743	34000	2659			-	_		860								
	100	STE		0592	3401	2680	001	3174	10	066		817								
		STE		0482	3405	2696		1620		190) 14	789								
	188	OBS	0606	0477	34053	2697						788								
		STE	0700	0433	3416	2711		0320		300		786								
		STE	0800	0396	3425	2722	000	9311	1.	398		789								
	188	OBS	T0809	0393	34263	2723						789								
		ST		0375	3435	2732		8410		487		798								
		ST		0355	3442	2739	000	7738	1:	56		+807								
	188	OBS	71009	0353	34429	2740		7000		, , .		+808								
		ST		0335	3445	2744		7330		64:		+816								
		STO		0317	3448	2748		6984		714 782		+825 +834								
		STE		0298	3451	2752		6629		104 84°		+844								
		STI		0280	3454 3457	2756 2759		5927		908		853								
	188	STO	T1512	0261	34568	2760	000	1161	1	-00		+855								
	100	003	11312	0201	34500	2,00														

TABLE V. Observed and interpolated oceanographic data for stations taken by USCGC PONT-CHARTRAIN at Ocean Station NOVEMBER, 3-24 September 1967, prepared from NODC Listing No. 31-1163 PW.

REFE	RENCE	SHIP					6K	MARS	OEN	STATIO	N TIM			(RIGIN	ATOR'S		DEPTH	MAX. OEPTH		WAVE	WEA-	Crono			NODC	
CODE	10,	COOE	LATITU		LON	GITUDE	NDC	SOU	-		MT)		'EAR	CRUISE		MOITAT		BOTTOM	OF		ERVATIONS	THER	CODES			UMBER	
-	NO.			1/10		1/10	-	10°		MO OA	_			NO,		UMBER			S'MPL"	S DIR.	HGT PER SE	^	TYPE A AA		-		
31	116	3 PW	3008	3 N	13	9575W	1	122	09	09 0:	3 19	90 1	967	N09	00	1		4486	15	00	0 3	01	6 5			0001	
									WA'	TER	WIN		BARC		IR TEA	AP. ℃	vis.	NO.	SPE	CIAL							
										TRANS.	OIR.	SPEED	METE	R D	RY	WET	CODI	OBS.		ATIONS							
									CODE	lm1	\rightarrow	FORCE	(mbs		JEB	BULS	-	-									
										1	05 3	505	17	3 2	50	239	8	14									
		MESSENG	RICAST	CA	20					Ι	,			SPECIFIC	VOLUE	WE S	Δ O	SOI	סאט		PO4-P	TDTAL-P	NO2-N	NO3-N	S1 O4-St		
		TIME	or NO.	TY	PE	DEPTH	(m)	Т	°C	\$ */	••	SIGM	A-T	ANOM	ALY-XI	, 0	YN, M K 10 ³	. VELO	OCITY	0 2 mI/1	µg = at/1	μg • al/l	μg = α1/1	υg - σ1/1	μg - 01/I	pΗ	18
		HR 1/10	-				-			-																	+
				_	TO	200	_	2.	2/2	2501	.	220	2	007	007	, ,	000	1.5	316					1		I	-
		19	13	08	TD	000			363 363	350		238		004	082	4 0	000		316								
		19	0		TD	001			358	351		238		006	050	7 0	041		317								
		19	0	08		001			358	351		238		004	0,0	, 0	041		317								
		19	0		TD	002			349	352		239		003	962	2 0	081		317								
					TD	002			349	352		240			933		120		317								
		19	0	08		003			340	352		240		000	,,,	, 0	- 20		317								
		17	0		TD	005			023	349		246		003	289	4 0	192		235								
		19	0	08		005			023	349		246		000	207	7 0	176		235								
		19		08		007			844	348		250							188								
		17	0		TD	007			839	348		250		002	930	0 0	270		186								
		19	0	08		009			728	346		252		002	,,,	7 0	270		156								
		1 7	0		TD	010			723	346		252		002	769	9 0	341		155								
				_	TD	012		_	607	345		253			656		409		122								
					TD	015			486	343	-	255			528		474		086								
		19	a	08		015			481	343		255		000		_			084								
					TD	020			225	340		258		002	239	5 0	593		004								
		19	0	08	5	T020	3	1.	212	340	30	258	13					15	000								
				5	TD	025	0	10	082	340	5	260	9	001	987	9 0	699	14	962								
				S	TD	030	0	0	962	340	7	263	1	001	782	1 0	793	14	927								
		19	0	08	5	030	3	0	955	340	70	263	12					14	925								
				S	TD	040	0	0	774	340	1	265	6	001	553	5 0	960	14	872								
		19	0	08	5	040	2	0	771	340	06	265	6					14	871								
					TD	050	0	0	611	340	2	267	9	001	334	7 1	104	14	824								
				S	TD	060	0	0	494	340	6	269	16	001	169	1 1	230	14	794								
		19	0	0.8	5	060	5	0	489	340	63	269	7					14	793								
				5	TD	070	0	0	441	341	6	271	0	001	041	4 1	340) 14	790								
				5	TD	080	0	0	401	342	5	272	2.1	000	936	9 1	439		791								
		19	0	08	S	T081	0	0	398	342	59	272	2.2						791								
				5	TD	090			376	343		273			849		528		798								
					TD	100			353	344		273		000	771	5 1	609		806								
		19	0	0.8		T100			352	344		274							806								
					TD	110			331	344		274			709		683		814								
					TD	120			311	345		275			656		752		823								
					TD	130		-	292	345		275			618		815		832								
					TD	140			275	345		275			597		876		842								
					TD	150			259	345		276		000	584	3 1	939		852								
		19	0	0.8	S	T150	9	0	258	345	70	276	0					14	853								

REFERENC					- =	MARS			ON TH	ME		Т	ORIGH	OTAP	R°S	П	DEPTH	MAX. DEPTH		WAV	E	WEA-	CLOUD			NODC	
CTRY 10.	COOE	LATITU	DE	LONG	GITUOE	SON	ARE	(1	SMTI		YEAR			ITATE			TO BOTTOM	OF		ERVA		THER	COOES			STATION	
CODE NO		-	1/10		1/10	10°	1°	MO C	AY H	2,1/10			NO.	NUM	BER	_	- IOM	S, W bF.2	DIR	HGT P	ER SEA	CODE	TYPE A M			NOWBER	
31116	3 PW	3008	15N	139	955 W	122	09	09 0	4 1	97	1967	7 1	109 00	2		-	4572	15	34	0	4	01	6 3		ì	0002	
•						1	WAT	ER	W	INO	RAS	-	AIR TE	MP. '			NO.			, - ,		, -			,	000-	
							COLOR	TRANS.	DIR.	SPEED	MET		DRY	W	ET C	VIS.	OBS.	OBSERV	ATIONS								
						į	CODE	lm1	DIK	FORCE	(mb	(20	BULB	80	F8		DEPTHS										
									00	500	16	59	250	2	33	8	14										
	MESSENC					т-'				T		7.			× /		SOU	IN O		T							5
	TIME	or NO.	CAR		DEPTH (m)	Т	°C	S	•/	SIG	7-AN		ECIFIC VOL		¥ ∠ DYN	. M.	VELO		02 ml/		4-P	107A L-P	NO2=N μg - σt/l	NO ₃ -N μg - at/!	\$1 O4=!	pH	Ċ
	HR 1/1	0								-		+			. A	10-				1	-	-			-	-	
																				1		1					
				TD	0000		362	350		23	77	C	004138	3 1	00	00	15	315									
	19	7	08		0000		362	349		23								315									
				TD	0010		356	350			79	C	004120	01	00	41		315									
	19	7	08:		0010		356	350		23								315									
			_	TD	0020		267	350		24			00381		00			296									
				TD	0030	2	179	35		24	37	C	003578	37	01	18	15	275									
	19	7	08:		0030			350							- 1												
		_		TD	0050		006	349			69	(003276	59	01	86		230									
	19	7	08		0050		006	349		24		_						230									
	1.0	-		TO	0075		795	346		25		C	02946	50	02	64		172									
	19	f	08	5 TD	0075		795 741	346		25		_			0.3	2.		172									
	19	7	08:		0100	1	/ 4 1	346		25	18	(002824	+ 5	03	30	15	160									
	15	1		10	0125	1	663	349		25	3.0	_	002722	20	04	0.6	1.5	140									
			S		0150		559	344		25			02596		04			110									
	19	7	08:		0152		550	344		25			102370	0	0 7	12		108									
	1,	,		T D	0200		269	340			77	-	002285	5.4	05	04		020									
	19	7	OB:		T0205		245	340		25			,0220.	, ,	0,	, 7		012									
	* /	,		TD	0250		107	340		26		0	0201	75	07	0.2		971									
				TO	0300		975	340		26			01798		07			932									
	19	7	085		0305		963	340		26								928									
				TD	0400		782	340			54	C	01569	52	09	65		875									
	19	7	08:		T0402		778	340		26								874									
				T D	0500		611	340			79	0	01334	+7	11	10		824									
				TD	0600		491	340			96		0116		12			793									
	19	7	0B:		0607		484	340		26								791									
				TD	0700		440	34		27		(01032	2.8	13	45		789									
				TO	0800		401	342		27			0092		14			791									
	19	7	08:		0804		400	342		27			,					791									
				TD	0900		377	34:		27		C	000843	33	15	31		799									
				TO	1000	0	354	344	1	27	39	(00780	0.1	16	13	14	806									
	19	17	0B:		T1006	0	353	344	18	27								807									
				TD	1100		333	344			44	C	00739	8	16	88		815									
			S	TD	1200	0	313	344	8	27	48	C	0069	74	17	60	14	823									
			S	TD	1300	0	295	349	1	27	52	C	00660	9	18			833									
			S	TD	1400		277	345	4		56		00623		18			842									
			S	TD	1500	0	262	345	57	27	60	C	00589	93	19	53	14	853									
	19	7	08	S	T1504	0	261	345	69	27								853									

ERE	NCE IO. NO.	SHIP COOE	LATITU	DE 1/10		SITUOE NOUTE	MARS SOU	ARE	(4	ON TIA	YEAT	100		OTAI ITATZ MUN	ON	DEPTH TO BOTTOM	M A DEPT OF S'MP	H OB	WAV		WEA- THER COOE	CLOUD CODES		S	NOOC TATION UMBER	
١,		-	2007		1 2 0				-						000				_			+				
r l 1	163	PW	3007	N	139	958 W	122	1		_	94 196	0 / 1	109 00		to I	4755	1	5 00	101	3	01	6 2			0003	
							-	WAT		W		ARO-	AIR TE		VIS.	NO. OBS.		PECIAL								
							1	COLOR	TRANS,	DIR.		ETER mbs1	BUL9	BU	ET COD	OEPTHS	OBSER	RVATIONS								
							ŀ			00	70402	193	267	+	50 8	14										
	1				1					00	300 1	190	201								_				ì	
		MESSENGR TIME o	CAST NO.	CARE		OEPTH (m)	т	°C	S	./	SIGMA-1		ECIFIC VOL		₹ A D	. so	UND	02 ml/			OTAL-P	NO2-N	N03-N	\$104-5	рН	5
		HR 1/10	NO.	TYPE									NOMALILA		X 103	VEL	OCITY		פע	- 01/1	/g = 01/I	μg = α1/i	ug = a1/1	µg = al/1		C
					- 1																					
				ST	0	0000	2.	424	350	01	2359	(004306	3	0000	15	330									
		194		085		0000	2.	424	350	005	2359					15	330									
				ST		0010		359	349		2377	- (004140	7	0042		316									
		194		085		0010		359	349		2377						316									
				ST		0020		311	350		2393		003992		0083		306									
		101		ST		0030		230	350		2418	(00375	17	0122		287									
		194		OBS		0030		230 972	350		2418	,	003199	. 1	0191		5287 5221									
		194		5T 085		0050		972		395	2477	(003199	9 L	0191		5221									
		174		ST		0075		815	348		2511		002882	7	0267		5179									
		194		085		0075		815	348		2511	,	30200	. 1	010		5179									
		174		ST		0100		716	346		2523		002780	1	0338		5152									
		194		085		0100	_	710	346		2323	`	002100	, ,	0000	, .	1172									
		1,7		51		0125	1.	607	344		2536		00266	3.6	0406	. 14	5122									
				51		0150		489	34:		2550		00253		0471		087									
		194		089		0152		479	34		2551						5084									
				ST		0200		217	340		2583	-	00222	47	0590		5001									
		194		085	,	T0206	1	190	341	022	2587					14	4993									
				ST	0	0250	1	076	340	06	2611	(00196	94	0695	14	4960									
				ST	0	0300	0	961	340	07	2631		00177	97	0789	9 14	4927									
		194		085		0307		946		071	2634						4922									
				ST		0400		777	34		2655	4	00155	79	0956		+873									
		194		085		T0407		765		009	2657						4870									
				ST		0500		618	340		2677		00135		110		+827									
		101		51		0600		502	340	-	2694	1	00118	52	1228		4797									
		194		089		0613	-	490 444	340		2696		00105	2.6	1340		4794 4791									
				S T S T		0700 0800		402	34		2720		001057		1940		+791 4791									
		194		085		0814		397		254	2722	,	00094.	J -+	7 -4-4 (4791									
		1 74		ST		0900		377	34		2730		000858	2 1	1530		4798									
				ST		1000		355	344		2738		00078		1612		4807									
		194		085		1020		351		420	2740			-			4809									
				ST		1100		335	34		2743	4	00074	11	1688		4815									
				ST		1200	0	316	34	47	2747		00070		1760		4824									
				51		1300	0	299	34!		2751		00067		1829	9 14	4834									
				ST	0	1400	0	283	34	53	2755	4	00063	76	1895	5 14	4845									
				ST	D	1500	0	269	34!	56	2758	- (00060	54	1957	7 1	4856									
		194		OBS	5	T1528	0	265	34	564	2759					14	4859									

REFER	ENCE				- a	MARSDEN	STATION T		ORIGINA	*0016		MAX.								
CODE ND.		CODE	LATITUDE LD		DNGITUDE TO	SOUARE	(GMT)	YEAR		ATION	DEPTH	DEPTH	DRS	WAVE ERVATIONS	WEA-	CLDUD			NODC	
					* '1/10 " ×	10° 1°	MO DAY H	1/10		IMBER	0077011	S'MPL'S	DIR.	HGT PER SE	THER	TYPE AM	_		STATION	
31	1163	PW	3002	N I	4003 W	123 00	09 06 1	94 1967	N09 004								-			
					' '	WA		VIND	A (0. 75 ta)	P. 10	4572	15	32	0 4	01	18 16	i .	10	004	
						COLOR	TRANS. DIR.	SPEED BAR	0-	WET COD	NO. 085.	SPEC								
						CODE	(m) Dik.	OR (mb		BULB	DEPTHS	DBSERVA	TIONS							
							00	S00 220	266	244 8	13									
	MESSENGE C		CAST	CARD		- 4-			SPECIFIC VOLUM					T					1	
		HR 1/10	T ND.	TYPE	DEPTH (m)	T *C	5 %.	SIGMA-T	ANOMALY-X107	₹ △ 0 DYN, M X 10 ³	. VELDO) w /	PD 4-P	TDTAL-9 pg - oi/i	NO2-N µg - at/l	NO3-N	\$104-5		C
							<u> </u>	-		X 10-				74.4	py - 0121	ру = 01/1	μg - αI/I	µg - 01/		С
		,	1 1	STD	0000	2416	7500			1										
		194		085	0000	2416	3502	2363	0042699	0000	1532									
		25.4		STO	0010	2416 2378	35024	2363			1532									
		194		085	0010	2378	3507	2378	0041370	0042	1532									
				STD	0020	2259	35065 3503	2378	007077	0007	1532									
				STO	0030	2132	3495	2409 2439	0038374	0082	1529									
		194		085	0030	2132	34952	2439	0035590	0119	1526									
				STD	0050	1852	3467	2491	0030697	0105	1526									
		194		085	0051	1842	34658	2493	0030697	0185	1518									
				STD	0075	1746	3465	2515	0028438	0259	1518									
		194		085	0076	1742	34650	2516	0020430	0239	1515									
				STD	0100	1647	3464	2538	0026352	0329	1514									
		194		085	0103		34642		0020332	0020	1514	0								
				STD	0125	1545	3447	2548	0025442	0395	1511	4								
				STD	0150	1441	3428	2556	0024725	0459	1508									
		194		085	0154	1424	34251	2558		0,100	15069									
		101		STO	0200	1219	3404	2583	0022284	0576	15002	2								
		194		085	T0207	1192	34020	2586			14993	3								
				STD	0250	1071	3404	2610	0019747	0682	14958	В								
		194		STD	0300	0952	3407	2632	0017681	0775	14923	3								
		134		085 STD	0308	0935	34070	2635			14918	8								
		194		085	0400 T0411	0788	3401	2654	0015740	0942	14877									
		154		STD	0500	077 1 0624	34006	2656			14872									
				STD	0600	0503	3402	2677	0013496	1088	14830									
		194		085	0614	0490	3404 34044	2693	0011941	1216	14797									
				STD	0700	0450	3414	2695 2707	0010660	1700	14793									
				STD	0800	0411	3425	2720	0010669	1329	14793									
		194		085	0814	0406	34260	2721	0009485	1429	14795									
				STD	0900	0381	3433		0008627	1530	14795									
				STD	1000	0355	3441		0007812	1520 1602	14800									
		194		085	1017	0351	34419	2740	0007012	1002	14807 14808									
				STD	1100	0332	3447		0007177	1677	14815									
				STD	1200	0311	3451		0006708	1747	14823									
				STD	1300	0293	3454		0006343	1812	14832									
				STD		0278	3456		0006082	1874	14843									
		104		STD	1500	0265	3456		0005987	1934	14854									
		194		08\$	T1519	0263	34564	2759			14857									

	, , ,																								
RENCE	SHIP				E 2	MAR	SDEN	STAT	ION TH	W.E			ORIGIN	ATO	R*S	DEPTH	DEPTH		WAVE	WEA			1	NODC	
10. NO.	COOE	LATITU		LONGITUDE		sou			IGMT)		YEAR	CRUI		TAT		TO BOTTO	OF	1	SERVATIONS	CODI			S1	UMBER	
-			1/10	'1/1		10°	1	MO	DAY HE			NO	7.	MUM	I BEN		m S'MPL'	S DIL	HGT PER SI	A	TYPE AAA	T			
116	B PW	2957	7 N	1400051	V (087	_		07 1	90	1967	7 NO	9 00	5		405	0 15	35	0 4	01	8 2			0005	
							WAI	rer	W	INO	BAR	0	AIR TE	MP.	°C VIS.	NO.	SPI	CIAL							
							COLOR	TRANS.	DIR.	SPEED	M ET		ORY BULB		ET COD	OBS. DEPTH	Coccni	VATIONS							
							CODE	11111	100	FORCE	+			_			-		-						
									00	500	2 1	1/	278	2	56 8	14									_
	MESSENGI	CAST	CARD	DEPTH	/-·		*c		•/			SPECI	IFIC VOLU	IAN E	₹ A O	S	DUND		PO4-P	TOTAL	NO2-N	NO3-N	SI O4-SI		5
	HR 1/10	T NO.	TYPE	Derin	Cist 1		C	1 3		3100	T-AA	ANC	OM ALY-X1	07	x 10 ³	, AE	LOCITY	0 2 ml/	yg = at/l	νg = e1/1		μg - σt/l	μg - a1/l	pH	č
		1						-		_		-		\neg		_									Н
	1	1	ST	0 000	00	7	419	35	14	23	71	0.0	4192	6	0000	1	5331				J		1		11
	19	0	OBS				419		143	23			, , _ , _		0000		5331								
	-	-	ST				440	35		23		0.0	4222	4	0042		5338								
	19	0	OBS				440					-			0042		- 550								
			57				430	35	24	23	75	0.0	4164	0	0084	. 1	5338								
			ST				420	35		23			4105		0129		5337								
	19	0	OBS	00:			420		284	23		0			0 - 2 .		5337								
			ST				958	34		24.		0.0	3144	0	0198		5217								
	19	0	OBS				958		923	24							5217								
			ST	D 00	75	1	775	34	69	25		0.0	2884	7	0273		5166								
	19	0	OBS	00.	75	1	775	34	686	25							5166								
			ST	0 010	0.0	1	712	34	66	25	25	0.0	2763	7	0344	. 1	5151								
	19	0	OBS	010	0.0	1	712	34	664	25						1	5151								
			ST	D 017	25	1	648	34	60	25	35	0.0	2674	0	0412	2 1	5135								
			ST	0 019	50	1	552	34	48	25	48	0.0	2559	1	047	7 1	5108								
	19	0	OBS			1	547		471	25	48						5107								
			ST				252	34		25		0.0	12267	9	0598		5013								
	19	0	OBS	T020) 4	1	232	34	049	25	81						5007								
			ST	-			098	34		26			2006		0709		4968								
			ST				972	34		26		0.0	1793	2	0800		4931								
	19	0	085				1965		077	26					- 0		4929								
			ST				779	34		26		0.0	1558	6	096		4874								
	19	0	OBS				774		011	26							4872								
			ST				612	34		26			1328	-	1112		4825								
	1.0	_	ST			-	493	34		26		0.0	1160	14	1236		4794								
	19	U	OBS				1486		077	26					1.2.		4792								
			ST				444	34		27			1037		1346		4791								
	10	0	ST				406	34		27		00	0927	8	1444		4793								
	19	U	085				403		274	27					166		4793								
			ST				379	34		27			0853		1533		4799								
	1.0	0	ST				355	34		27		00	0781	2	1615		4807								
	19	0	085				352	_	418	27		0.0	0.720		160	_	4808								
			ST				333	34		27			00738		169	-	4815								
			ST				313	34 34		27 27)0699)0662		1761		4823 4832								
			ST				278		53	27			0628		1896		4843								
			ST				265	34		27			0597		195		4854								
	19	0	085				262		568	27		00	,000	۲.	190		4856								
	4.7	-	000	1 2 2		-		27	-00	6. 1	00						. 0 . 0								

REFERENCE	SHIP			-	≅ MAI	SDEN	STAT	ION T	IME			0	RIGIN	ATOR'S		DEPTH	MAX. DEPTH		WA		WEA				NODC	
CTRY ID.	CODE	LATITU		LONGITUDE	21	JARE		(GMT)		YEA	A.R	CRUISE		TATION		TO BOTTOM	OF			ATIONS	THER				STATION NUMBER	
	-		1/10	1/10	10*	1"		_	18,1/10			NO.	N	UMBER	-		S'MPL'S	DIR.	H G	PER SI	A 0001	TYPE A M	T	-	14 0 / 11 0 € 11	
31 1163	PW	3007	5N	14001 W	123	3 00	09	08	191	19	67	N09	00	6		4663	15	35	0	3	01	6 2			0006	
						AW	TER	V	VIND		BARO	_ A	IR TEA	AP. ℃		NO.	C D E	CIAL]							
						COLOR	TRANS.	DIR.	SPEEC) /	WETE	R D		WET	CODE	OBS.	DSSERV									
						CODE	(m)	-	FORC	-	(mbs)		F8	8118	-	-										
								34	507	7	21:	3 26	57	228	8	13										
	MESSENGR		CARD									SPECIFIC	VOLU	MF €	△	SOI	JND		Т	PD4-P	TOTAL-P	ND2-N	NO3-N	SI 04-	:	S
		Y NO.	TYPE		'	2, 1	2	*/	SIG	MA-	-Т	ANOMA	LA-XI	D7 D	(N. M (10 ³	. VEL	CITY	02 ml/l		9 - 01/1	µg - 01/1	μg = σ1/1	μg = α1/1	μg - αl.		C
	HR 1/10				-		+		+		-				. , ,				+						-	
			ST	D 0000	١.	2445	34	0.2	1 22	347		004			000	. 1.5	221							ł	1	
	19	1	OBS			2445		92 918		347		0044	+28	8 0	000		334									
	19.	1	ST			2390	34			368		0042	220	1 0	043		334 323									
	19	1	OBS			2390		984		368		0042	229	1 0	043		323									
		•	ST			2244	34			+11		0038	324	0 0	084		289									
			ST			2106	35			+49		0034														
	19	1	OBS			2106		997		+49 +49		0034	478	, 0	120		255 255									
	17.	1	ST			1857	34			+47		0030	176	5 0	185		186									
	19	1	OBS			1857		677		490		000	,,0	, ,	100		186									
		•	ST			1770	34			511		0028	383	3 0	260		165									
	19	1	OBS			1770		672		511		002			-00		165									
			ST			1707	34			26		0027	754	5 0	330		150									
	19	1	OBS	0100		1707	34	661		526							150									
			ST	0 0125		1613	34	56		540		0026	525	8 0	398		124									
			ST	D 0150		1502	34	43	25	555		0024	+89	4 0	461	15	092									
	19	1	OBS	0152		1492	34	413	25	556						15	089									
			ST			1223	34	04	25	82		0022	235	8 0	580	15	003									
	19	1	OBS			1214	34	027	2.5	83						15	000									
			ST			1084	34			09		0019	983.	2 0	685	14	963									
			ST			964	34			531		001	784	6 0	779		928									
	19	1	085			951		073		33							924									
			ST			774	34			556		0015	553	5 0	946		872									
	19	1	OBS	T0406		764		008		557							869									
			ST			0621	34			577		0013			092		828									
	1.0		ST			501	34			94		001	192	4 1	219		796									
	19	1	OBS	0608		1493	-	047		95		0011			3.00		795									
			ST)460	34			706		0010			333		797									
			ST ST			388	34 34			717 728		0009			436		800									
			ST			352	34			739					529		803									
	19	1	OBS			352		419		739		000	112	<i>5</i> 1	611		806									
	19.	_	ST			327	34			137 144		000	720	2 1	686		806 812									
			ST			305	34			749		0006		_	086 757		820									
			ST			288	34			752		0006			824		830									
			ST			274	34			756		0006			888		841									
			ST			265	34			759		0000			948		854									
	19	1	OBS			265		566		759		500.	,,-	_ 1	- 40		854									
				, , , , , ,		2-2			-								0 ,									

ENCE				- 4	MARSDEN	IT NOITATE	ME	ORIGINATO	OR'S	DEPTH DEA	AX.	WAVE	WEA-	CLOUD		T ,	1000	
ID.	CODE	LATITUE	DE LO	NGITUDE HE	SOUARE	(GMT)	YEAR	CRUISE STAT	TION	TO OEP		SERVATIONS	THER	CODES		ST	ATION	
NO.	0000		1/10	1/10	10" 1"	MO DAY H	R,1/10	NO. NUA	MBER	80TTOM S'MI	PE'S DIL	HGT PER SEA	CODE	TYPE AM	1	- 1	U A* B E R	
1163	PW	3006	N 1	4000 W	123 00	09 09 2	201 1967	NO9 007		4380 1	.4 02	3 3	01	8 4			0007	
						ATER W	IND BAR	AIR TEMP.		NO.		7	,					
					COLO	R TRANS. DIR.	SPEED MET	ER DRY V	VET COOL	085.	SPECIAL ERVATIONS							
					CODE	lm) Oth.	FORCE (mb	s) BULB 8	UT8	DEPTHS								
						05	512 22	20 250 2	233 8	14								
	MESSENGR	CAST	CARD				1	SPECIFIC VOLUME	₹ ∆ D	SOUND		PO4-P	TOTAL-P	NO2-N	NO3-N	SI O4-51		5
	TIME	of NO.	TYPE	DEPTH (m)	J, L	5 %.	SIGMA-T	ANOMALY-X107	DYN. M	VELOCITY	O ₂ ml/		MB - 01/1		yg = 01/1	49 - a1	pН	C
	HR 1/10	-		 			-		X 10.	-								+
						1			1	1				1				
			STD	0000	2459	3515	2360	0043032	0000									
	20	1	085	0000	2459	35148	2360	00/0820	00/2	15340								
	20	1	STD	0010	2409 2409	3526 35260	2383	0040838	0042	15331 15331								
	20	1	OBS STD	0020	2265	35260	2383	0037310	0081									
	20	1	OBS	0029	2157	35135	2446	0037310	0001	15270								
	20.	A-	STD	0030	2149	3513	2448	0034749	0117									
	20	1	085	0048	1993	34962	2477	005.1.15	0-11	15227								
			STD	0050	1968	3493	2481	0031638	0183									
	20	1	085	0072	1769	34682	2512			15164	+							
			STO	0075	1765	3468	2513	0028644	0259	15163	3							
	20	1	085	0096	1719	34683	2524			15153	3							
			STD	0100	1702	3465	2526	0027512	0329	15148	3							
			STD	0125	1592	3447	2538	0026454	0396	15117	7							
	20	1	085	0145	1494		2549			15087								
			STD	0150	1461	3429	2553	0025062	0461									
	20	1	085	T0197	1201	34034	2586			14995								
			STD	0200	1193	3404	2588	0021806	0578									
		_	STD	0250	1063		2614	0019397	0681									
	20	1	035	0295	0965		2631		07=	14928								
			STD	0300	0957		2633	0017658	0774									
	20	1	OBS	10397	0804 0798		2652 2653	0015821	0941	14881 14881								
			STD	0400 0500	0629		2676	0013585	1088									
	20	1	OBS	0597	0512		2691	0013363	1000	14800								
	20	4	STD	0600	0510		2691	0012160	1417									
			STD	0700	0458		2706	0010838	1332									
	20	1	085	0792	0418		2718	001000		14796								
		_	STD	0800	0415		2719	0009606	1434									
			STD	0900	0383		2729	0008650	1525		1							
	20	1	085	0988	0358		2737			14806								
			STD	1000	0355	3440	2738	0007886	1608	1480	7							
			STD	1100	0330	3447	2746	0007154	1683	3 14814	4							
			STD	1200	0308	3451	2751	0006673	1752	14822	2							
			STD	1300	0290	3454	2755	0006308	1817									
			STD	1400	0276	3456	2758	0006059	1879									
	20	1	OBS	T1448	0270	34562	2758			14848	8							

REFERENCE	S.U.D.				# MAR	SOEN	STA	II NOI	ME			ORIGIN	ATOR'S			EPTH	MAX. DEPTH			AVE	WEA-	CLOUD			NODC	
CTRY ID.	CODE	LATITU		DNGITUOE	5 부 1 .	JARE		(GMT)		YEAR			OITATE			TOM	DF S'MPL'S	0.0		ATIONS	THER	TYPE AM			UMBER	
			1/10	1/10	10*	1.		DAY H			_			R .	⊢			1					-			
31 1163	PW	3005	N 1	13959 W	122				97	196	7 N	09 00			44	480	16	00	إاه	3	01	612	1	- 1	0008	d
						WA	_	\ \\	SPEED	BA		AIR TE		- vis		ND.	SPE	CIAL								
						COLOR	TRANS	DIR,	OR	14. 5		DRY	BULL	COL		EPTHS	OBSERV	ATIONS								
								36	_	<u> </u>	37	261	23	9 8	+	14										
						<u></u>	<u> </u>	36	510		21	201	\vdash		-	14			4						1	
	MESSENGR	CAST	CARD	DEPTH Im	. 1	r *c	5	٠/	SIG	MA-T		CIFIC VOLU	IME	₹ △ DYN. A	À.	VOS		O 2 m1/		PO ₄ =P	TOTAL-P	NO2+N	NO3-N	S1 O4-S	pH	S
	HR 1/10	of NO.	TYPE								A1	NOMALY-X		x 10 ³		VELO	CIII			yg - 01/t	µg = a1/1	1/10 - gu	µg - of/1	νg - α1/		C
																									1	
	1	1 1	ST	0000) ' 2	2439	35	14	23	165	0	04255	3	000	ο ΄	153	335									
	19	7	OBS	0000) 2	2439		135	23	65							335									
			ST			2422		13		370	0	04211	. 5	004	2		333									
	19	7	OBS	0010		2422		134		70				- 0			333									
			STI			2355		18		93		03997		8 00			319									
			STI			282		22		17	0	03769	16	012	2		303									
	19	7	OBS	0034		2251		232		127	_		-	010	-		296									
		_	STI			2115		98		+46	U	03501	. 1	019	2		260									
	19	7	OBS	0054		2079		941		+53	_	0.204.5		^ ~ ~	,		251									
	1.0	_	STI			1864	_	89		05	U	02947	1	027	6		194 174									
	19	7	085	0033		1792 1699	-	841		19	0	02722		034	,		148									
	10	7	⇒TI OBS	0100		1699		599	2:	29	U	102122	. 0	034	0	10	140									
	19	1	ST			1568		46	2 6	642	0	02600	7	041	3	15	109									
			ST			1442		28		556		02474		047			071									
	19	7	OBS	0162		1384		208		63	·				_		053									
		'	ST			1203		06		87	0	02184	2	059	3	14	997									
	19	7	OBS	T0216	5	1139	34	014	25	96						14	976									
			ST	0 0250) ;	1061	34	04	26	12	0	01958	3 3	069	6	14	955									
			ST	0300) (0955	34	05	26	31	0	01784	+7	079	0	14	924									
	19	7	085	0 3 2 4		0909	_	052		38							911									
			ST			782		01		554	0	01565	2	095	7		875									
	19	7	OBS	10433		0731		998		61							860									
			ST			0632		02		576		001362		110			833									
			ST			0515		07		94	C	001187	73	123	1		803									
	19	7	OBS			0471		098		702		0106	9 1	134			793 793									
			ST			0448		15		708 720		001057 000946		144			794									
	19	7	ST OBS			0387		312		727	U	100946	2 6	144	4		797									
	17	(ST			0379		34		730	0	000853	3 ()	153	4		799									
			ST			0356	-	40		738		000789		161			807									
	19	7	OBS			0338		451	_	743		, , , , , , ,			-		814									
			51			0334		46		744	C	0072	74	169	2		815									
			ST			0314	_	51		750		000674		176			824									
			ST			0296		54		754		00063		182			834									
			ST			0279	34	-56		757	0	000609	93	189	0	14	843									
			ST			0264	34	+58	2	760	(000582	28	194	9	14	854									
	19	7	OBS			0246	34	+580	2	762						14	868									

ENCE SHIP STATION TIME DRIGINATOR'S DEPTH DATH	AVE WEA- CLOUD NODC
ID. CODE LATITUDE LONGITUDE SOUARE GMTI YEAR CRUISE STATION TO OF OBSERV	RVATIONS THER CODES STATION
17 TO TO TO DAY HE, 17 TO TO. NORMER SAFES DR. HE	GT PER SEA CODE TYPE AMT
1163 PW 3002 N 13959 W 122 09 09 11 186 1967 N09 009 4480 15 02 0	0 1 01 3 4 0009
COLOR TRANS SPEED METER DRY WET COST OBS. SPECIAL	
COLOR TRANS. OR OR OR OR OR OR OR OR OR OR OR OR OR	
03 509 234 261 233 8 14	
TIME ONO. TYPE DEPTH (m) T C S %. SIGMA-T SPECIFIC COLOME DYN. M. VERDCITY O2 m//	PO4-P TOTAL-P NO2-N NO3-N SIO4-SI PH C
HR 1/10 X 103 VECOCITY	29 - 077 29 - 077 29 - 077 29 - 077
STO 0000 2436 3515 2367 0042366 0000 15335 186 08S 0000 2436 35149 2367 15335	
186 OBS 0000 2436 35149 2367 15335 186 OBS 0009 2424 35146 2370 15333	
STD 0010 2410 3515 2374 0041695 0042 15330	
STO 0020 2270 3513 2414 0037937 0082 15297	
186 OBS 0028 2157 35121 2445 15269	
STD 0030 2121 3506 2450 0034522 0118 15259	
186 OBS 0047 1885 34699 2485 15193	
STD 0050 1871 3469 2488 0031007 0184 15190	
186 08S 0070 1779 34634 2506 15166	
STO 0075 1759 3464 2511 0028832 0258 15161	
186 OBS 0094 17750 34647 25080	
STD 0100 1653 3460 2534 0026774 0328 15133 STD 0125 1537 3440 2545 0025781 0394 15099	
186 08S 0142 1452 34281 2554 15073	
STD 0150 1400 3422 2560 0024331 0456 15057	
186 OBS T0192 1175 34009 2589 14985	
STD 0200 1156 3402 2593 0021283 0570 14980	
STD 0250 1042 3407 2617 0019039 0671 14948	
186 085 0287 0962 34081 2632 14925	
STD 0300 0934 3407 2636 0017362 0762 14917 186 085 0383 0770 34008 2656 14868	
STD 0400 0740 3401 2660 0015052 0924 14859	
STD 0500 0592 3401 2680 0013159 1065 14817	
186 OBS 0579 0506 34015 2691 14795	
STD 0600 0494 3404 2694 0011839 1190 14794	
510 0700 0443 3416 2710 0010438 1302 14791	
186 OBS 0774 0412 34238 2719 14791	
5T0 0800 0404 3426 2722 0009329 1400 14792	
STD 0900 0376 3434 2731 0008495 1490 14798	
186 OBS T0975 0357 34392 2737 14803	
STD 1000 0351 3441 2739 0007766 1571 14805	
STD 1100 0329 3446 2745 0007216 1646 14813 STD 1200 0310 3450 2750 0006770 1716 14822	
STD 1300 0294 3453 2754 0006428 1782 14833	
STD 1400 0281 3455 2757 0006190 1845 14844	
186 OBS T1471 0273 34553 2757 14853	

REFEREN		SHIP	1 4 747	0.		MARSDEN	STATION TI		ORIGINA	ATOR'S	DEPTH	MAX. DEPTH		WAVE	W EA-			T	NDDC	
	10.	CDDE	LATITU	1/10	NGITUDE STORY	SQUARE	IGMT)	YEAR		TATION UMBER	BOTTOM	OF :		SERVATIONS	THER	CODES			STATION	
-		DIA	2025				MO DAY H					S'MPL'S	DIR	HGT PER SE	A	TYPE AM	T	-	HOWBER	
3 1 1 1	103	PW	2825	NIT	+002 W			97 1967			4663	14	00	0 2	01	6 2			0010	
						WAT		SPEED BAR		VIS.	NO.	SPEC	IAL							
						COLDR	TRANS. DIR.	DR Imb		WET COD	DBS.	DBSERVA	ZNOIT							
							07	\$15 17		228 8	14									
	í							017 11	7 270	1	1							1	-	L
		MESSEN GR TIME	CAST	CARD TYPE	DEPTH (m)	T *C	s */	SIGMA-T	SPECIFIC VOLUM		SOU		D 2 ml/l	PO ₄ -P	TOTA L-P	NO2-N	ND3-N	SI D4-	St pH	
		HR 1/10			ļ				210/11/20	x 10 ³	VELO	CITY		1/10 + QU	νg - σ1/1	µg - a1/1	yg - al/l	NB - at	/1	ı
	- 1											1								7
				STD	0000	2426	3540	2389	0040244	4 0000	153	35		, ,		,				
		19		OBS	0000	2426	35404	2389			153	35								
		19	7	085	0008	2419	35402	2391			153	35								
				STD	0010	2389	3538	2398	0039408											
		101	7	STD	0020	2254	3531	2432	003621	7 0078										
		19	1	OBS STD	0029 0030	2157	35269	2456	000000		152									
		19	7	OBS	0046	2155 21510	3527 35239	2457	003391	7 0113	152	71								
		17	1	STD	0050	2096	3522	2456Q 2469	002270	0170	165									
		19	7	OBS	0071	2018	35136	2484	0032788	0179	152 152									
				STD	0075	1998	3513	2489	0031027	7 0259										
		191	7	085	0091	1927	35111	2506	003102	0237	152									
				STD	0100	1912	3510	2509	0029198	3 0334										
				STO	0125	1855	3505	2519	0028263											
		197	7	QBS	0137	1820	35003	2524			151									
				STD	0150	1773	3492	2530	0027346	0476										
		197	7	OBS	T0179	1659	34745	2543			151	49								
				STD	0200	1539	3458	2558	0024731	0606	151	14								
				STD	0250	1306	3427	2583	0022373	0724	150	42								
		197	7	OBS	0270	1234	34193	2592			150	20								
		1.00		STD	0300	1178	3416	2600	0020887	0832	150	06								
		197	ſ	OBS	0358	1063	34106	2617			149									
				STD	0400	0943	3409	2635	0017582		-									
		197	7	STD	0500	0717	3404	2666	0014670	1186										
		191		OBS	0538	0653	34019	2673	001277		148									
				STD	0600 0700	0599	3409	2686	0012798											
		191	7	OBS	0700	0525 0513	3419	2703	0011219	1443	148									
		19		STD	0800	0470	34206	2705	0000071	15/0	148									
		197	7	QBS	0899	0470	3428	2716	0009971	1549	148									
		1 7		STD	0900	0425	34349	2726 2727	0009000	1644	148									
				STD	1000	0386	3441	2735	0009000		148 148									
				STD	1100	0353	3446	2743	0000176		148									
				STD	1200	0328	3450	2748	0006979		148									
				STD	1300	0309	3452	2752	0006677		148									
		197	7	085	T1355	0302	34530	2753	5000071	1747	148									
											1 40	7)								

RENCE	1											00(01)	1.70010			MAX.	-	-			01		-	
ID.	SHIP	LATITU	DE LO	ONGITUDE PER	SOU		TATZ	ION TIM		EAR	CRUIS	ORIGINA	TATIO		DEPTH TO	DEPTH		WAVE ERVATION:	W E		CLOUD		ST	ATION
NO.	CODE		1/10	1/10 ° ½	10"	1"	MO [DAY HR.	1/10		NO.		UMBE		BOTTON	S'MPL"	S D18.	HGT PER	EA CO	DE -	TYPE AMT		N	LAMBER
1163	B PW	2958	N 1	3959 W	086	99	09	13 2	01 1	967	NO	9 01	1		4206	15	06	0 3	0	1	6 2			0011
	1		'			WAI		WI			-	AIR TEA			NO.	T		101-1	, ,	- '	012	1	' '	0011
						COLOR	TRANS.	DIR.	SPEED OR	BAR	ER	©RY	WET	VIS,	OBS.	massas	CIAL							
						CODE	(m1		FORCE	(mb	5)	BULB	BULE		DEPTHS									
								11	802	16	3	261	22	8 8	14									
	MESSENGR		CARD			to.		. /			SPECIF	IC AOTH	w.E	₹ △ D DYN. M.	so	מאט		PO ₄ -P	TOTAL	- Р	NO2-N	NO ₃ -N	SI 04-Si	
	HR 1/10	NO.	TYPE	DEPTH (m)	1	"C	,	*/**	SIGMA	\ _T		MA(TwI)	7	X 10 ³	VEL	OCITY	02 ml/l	yg = 01/1	pg - 01		μg = 01/1	yg = σī/↓	yg = at/1	pН
	118 1710	1			+		1						_	-	+			1	1	\top				-
			STO	0000	1 2	439	35	11	236	3	0.0	4274	7	0000	1 1 5	335		1	1	- 1	1			
	201	1	OBS	0000		439		108	236		00	7217	-	0000		335								
			STD	0010		425	35		236		0.0	4229	4	0043		333								
	201	1	085	0010		425		121	236							333								
			STD	0020		262	35		240		00	3845	6	0083		294								
	201	1	085	0029			34	954																
			STD			121	34		244	1	00	3539	0	0120		258								
	201	1	085	0048		926		775	248							206								
			STD			912	34		248		30	3141	9	0187		202								
	201	1	OBS	0072		781		724	251							168								
			STO			768	34		251		00	2851	0	0262		164								
	201	1	085	0096		674		594	252							138								
			STO			656	34		253			2705		0331		133								
	20		SID			539	34		254		00	2582	3	0397		099								
	20	1	085	0146		438		276	255		0.0	2661	,	04.00		069								
	20	1	STD OBS	0150 0197		415	34	012	256 258		00	2441	4	0460		989								
	20,	1	SID			178	34		258		0.0	2168	0	0575		987								
			STD			070	34		261			1944		0678		958								
	20)	OBS	0294		979		095	263		00	17744	,	0010		933								
		-	STD			1967	34		263		0.0	1774	7	0771		929								
	20	1	085	0390		795		013	265							876								
			STD			1776	34		265		0.0	1552	7	0937	14	873								
			STD	0500	C	614	34	04	267	9	00	1327	5	1081	14	826								
	20	1	OBS	0587	(512	34	053	269	3						799								
			ST0			1504	34		269			1173		1206		796								
			STD			1450	34		271		00	1044	6	1317		794								
	20:	1	OBS	0780		415		242	271							793								
			STO			1409	34		272			0938		1416		+794								
	- 0 -		STD			378	34		273		0.0	0844	4	1506		799								
	20	1	OBS	0978		357		404	273		0.0	07/0	2	150		804								
			STO			351	34		274			0769	_	1586		805								
			STO			328	34		274			0705		1660		813								
			STD)308)292	34		275			0659		1728		+822 +832								
			STO			1272	34		275			0609		1854		*843								
	20	1	085	T1464		273		564	275		00	0009	,	1004		852								
	20	T	005	11404		1213	24	204	213	0					1.	0 22								

REFERENCE	SHIP		T	# 5	MARS	DEN	STATE	ON TH			ORIGIN			DEPTH	MAX.		WAVE	NS	WEA-	CLOUD		N ST	ATION	
CTRY IO.	CODE	LATITUOE		ORIFE TOUR	sou.			GMT)		AR		STATIC		BOTTOM	S'MPL"	L	HGT PER		CODE	TYPE AMI	-		JABER	
	0	1/11					_			247	NO9 01	2		4480	15	1	2 3		01	2 4			0012	
31 1163	PW	3005 N	1 13	951 W	122	09 WAT		14 1	NO 1	967	A ID TE			NO.	1		14121	1	01	1 214	1	1 '	00121	
							TRANS.		SPEED	METE)• ———	WE	VIS.	OBS.		CIAL								
						CODE	tm)	OIR.	FORCE	(mbs) BULB	BUI	8	DEPTHS										
								24	505	15	9 267	2.2	8 8	14										-
	MESSENGR	CAST C	ARO						T '		SPECIFIC VOLU	IME	ΣΔD	SOI	DNL		204-	P TO	TA L-P	NO2-N	NO3-N	\$104-51		5
	TIME		TYPE	OEPTH (m)	1 7	°C	\$	*/	SIGMA	~T	ANOMALY-X	107	DYN, M. x 10 ³		OCITY	O2 ml/l	h0 - 0.		g - et/l	μg - at/l	yg = at/1	µg = a1/1	pН	č
	HR 1/10						_		-					1										1
	!	1	STD	0000	1 2	441	350	0.9	236	1	004291	13	0000	15	335		1	'	'	'				
	197		85	0000		441		093	236		00.27		0 - 0 0		335									
			STO	0010	2	420	35	11	236	8	004226	57	0043	15	332									
	197	0	BS	0010	2	420	35	105	236	8					332									
			STD	0020		298	35		240		003901	13	0083		304									
	197	0	BS	0029		194	_	074	243				0101		278									
			STO	0030		183	35		243		003619	54	0121		276									
	197	7 0	BS	0048		992		874	247 247		003216	. 0	0189		225									
	197	, ,	STD	0050 0073		966 751	34	648	251		003210	00	0109		158									
	19		STD	0075		745	34		251		002844	44	0465		157									
	197	7 0	BS	0097		680		624	252					15	141									
			STD	0100		673	34		253		00270	76	0334	15	139									
			STO	0125	1	595	34	58	254	5	00257	18	0400		119									
	197	7 0	BS	0148	1	499	34	481	255						091									
			STO	0150		485	34		256		00243	19	0463		087									
	19	7 0	BS	T0199		203	_	038	258						996									
			STO	0200		200	34		258		002191		0578		995									
			STO	0250		083	34 34		261 263		00195		0682		963									
			STD	0300		982		114	263		00176	10	0172		935									
	19 [°]		BS BS	0399		834		013	264						895									
	17	,	STD	0400		832	34	-	264		00163	76	0946		894									
			STD	0500		1637	34		267		00135		1096		835									
			STD	0600	C	1500	34	0.7	269	6	00117	04	1222		+796									
	19	7 C	BS	0604	(1496	34	069	269						795									
			210	0700		1447	34		271		00104		1333		792									
			STD	0800		1405		27	272		00092	67	1431		+793									
	19	7 C	BS	0804		404		274	272		00001	2.2	1520		793									
			STD	0900		377		35	273		00084		1600		+799 +805									
	2.00		STO	1000		351		42	274		00076	92	1000		4806									
	19	/	BS	1009 1100		349	_	47	274		00071	31	1674		+813									
			STO STD	1200		308		51	275		00066		1743		+822									
			STD	1300		291	-	54	275		00063		1808		831									
			STD	1400		276		56	275		00060		1870		4842									
			STO	1500		264		56	275		00059		1930		4854									
	19	7 (DBS	T1521		262		564	275					14	4857									

													_	ORIGIN	ATORY		00000	MAX		WAVE	WEA-	CLOUD			100C	
REFERE		SHIP	LATITUI	75	LONG	SITUDE	DCTR	MARSDE	N E	STATION TH	WE	YEAR	CRU		TATIO	N	TO	DEPTH	1 000	ERVATIONS	CODE	CODES	-	51	UMBER	
CODE	10. NO.	CODE	•	1/10		1/10		10°	1" /	NO DAY HE	2,1/10		N		NU M BE	R	MOTTOR	S'MPL'	S DIR.	HGT PEP SE	A COOE	TYPE A M		-		
311	163	PW	3004	N	140	00 W		23 (10	09 15 4	00	1967	N	09 01	3		4572	15	31	0 2	01	6 2		1	0013	
1 21/1	100		300.	14			1 1 -		WAT		IND	BAR	0-	AIR TE	MP. °C	VIS.	NO.	SPE	CIAL							
										TRANS. DIR.	SPEED	MET	ER	DRY BULB	BUL.	CODE	OBS. DEPTHS	005501	ATIONS							
								C	300	(m)	FORC		-		-		14									
										24	507	15	9 1	261	22		14									7.
		MESSENGE	CAST	CAI	RO I	DEPTH	(m)	т *с	-	5 %	SIG	I-AM	SPEC	OMALY-X	IME In?	₹ A D		OCITY	02 ml/l	PO4-P µg = ot/1	TOTAL-P	NO2-N µg - al/l	NO3-N pg = pt/l	\$1 O4-51 pg = a1/1	pН	lo c
		TIME HR 1/10	T NO.	TYI	PE	GEFTA			~				^^	OMAL! = X		x 10 ³	AFL	OCILI		pg - 01/1	by - 0.71	py on	pg - 0	-		
																						ļ	1	1	1	11
		1	1	S	TD	000	0	24		3509		357	0	04331	. 3	0000		338								
		20	0	OB	S	000	0	24		35089		357				0017		338								
				_	TD	001		24		3509		961	0	04293	5 1	0043		336								
		20	0	08		001		24		35088 3513		361 372	0	04199	7	0086		333								
					TD	002		24		3513		395	U	04195	7 1	0000		5318								
		20	0	08		002		23		3515		398	0	03949	94	0126		5314								
		20	0	08	TD	004		20		34851		457	Ŭ	0 0 7 7 7 .	, -	0 + 2 (5238								
		20	U		570	005		20		3484		460	0	03369	9.4	0200	19	5234								
		20	0	08		007			89	34628	2 !	503					19	5169								
		20			STD	007		17	85	3464	2 !	505	0	0294	15	0278		5169								
		20	0	08		009	В	17	26	34672	2 !	522						5155								
				S	TD	010	0 (18	3466		523		02780		0350		5153								
				S	STD	012			0.8	3449		536	0	0266	8	0418		5122								
	200			0.5		014			93	34342		550 551	_	0252	6.6	0483		5086								
					TD	015			87 19	3434 3404		583		0223		060		5002								
		20		OE	STD	020			15	34031		583	~	OLLI				5000								
		20	10		5 T D	025			77	3406	_	610	C	0197	11	070	7 14	4960								
		20	0	OE		029			58	34071	2	632						4925								
		2.0			510	030		09	56	3407	2	632		0177		080		4925								
				5	STD	040	00		69	3401		656	(0154	92	096		4870								
		20	0		3\$	T040			69	34006		656	,	0 1 2 2	1 2	111		4870 4824								
					STD	050			09	3402		679	(00133	13	111		4024 4795								
		20	0		35	059			98	34036 3404		694 694	(00118	63	123		4794								
					STD	060			46	3417		710		0103		134		4792								
		20	10		STD BS	07			08	34264		721	`	, 0 2 0 0			1	4793								
		20	,0		5 T D	08			+05	3427		722	(00092	67	144	6 1	4793								
					STD	091		_	375	3435	2	732	(00084	10	153		4798								
		20	0.0		BS	09			350	34408	2	739						4804								
					STO	10		0:	348	3441	2	739		00077		101		4804								
					STD	11	00	03	325	3447		746		00070		168		4812								
					STO	12			305	3451		751		00066		175		4820								
					STD	13			289	3454		755		00062		182		4831								
					STD	14			276	3455		757		00061	34	108		4854								
		20	00	0	BS	T14	91	0;	267	34558	3 2	758					1	40)4								

REFERENCE	SHIP	LATITUDE	1,0	NGITUDE NGITUDE	MARS	DEN	STATIO	N TIMI	: [,	EAR		SINAI			DEPTH TO	MAX, DEPTH	OBS	WAVE ERVATIONS	WEA-	CLOUD			NDDC	
CTRY ID.	CDDE		10	NGITUDE NGITUDE	10°		MD DA			EAK	CRUISE ND.		MBER		BOTTOM	S'MPL'S		HGT PER SI	0000	TYPE AM	-		NUMBER	
31116	3 PW	295761		3957 W	086		09 1			967	N09 (014			3749	33	33	0 2	01				001	
1 21/110	7 7 7	27770	1 1-	,,,, wi	000	WA		WIN	_		A 10	TEMP						10121	1 01	8 4	1	1	0014	řI
						CDLDR	TRANS.		SPEED	METE	D-	- 1		VIS,	NO. OBS.	DBSERV.	ATIONS							
						CDDE	Lm)	JIK.	ORCE	(mbs		3	BULB		DEPTHS									
								34 5	504	15	6 26	1	228	8	18									
	MESSENG	CAST	CARD		,	5,-		,			SPECIFIC V	DLUMI	£ 2) D.	SDU	NO	//	PO4-P	TOTAL-P	NO2-N	ND3-N	SID4-S		
	HR 1/10	OF NO.	TYPE	DEPTH (m)	1	°C	\$ *,		SIGMA	7-1	ANOMALY		X	1. M. 10 ³	VELD		D2 ml/l	μg = α1/1	µg • a1/I	νg = at/l	μg = at/l	µg - at/	рН	
	11.4			1																			1	
	J	1 1	STO	0000	' 2	449	350	8 '	235	8	0043	228	0.0	00	15	337		1	1	1		1		
	18	7	OBS	0000		449	350		235	8					15	337								
			STD	0010		442	350		236		0043	081	00	43		337								
	18	7	OBS	0010		442	350		236							337								
			STD	0020		427	350		236		0042			86		3 3 5								
	1.0	7	STO OBS	0030		412	350		236		0042	594	01	29		333								
	18 18			0030		049	350 349		236							333 241								
	18	1	OBS STO	0050		049	349		245		0033	601	0.3	05		239								
	18	7	0BS	0074		858	347		249		00331	771	U Z	05		239 191								
	10	•	STD	0075		853	347		249		0030	006	0.2	85		190								
	18	7	OBS	0098	-	035	346			_	0000			0,5										
			STD	0100	1	733	346	7	252	0	0028	074	0.3	57	15	158								
			STO	0125	1	606	344	8	253	5	0026	687	04	26	15	121								
			STO	0150		472	343		255		0025	180	04	91		081								
	18	7	OBS	0150		472	343		255							081								
	2.0	-	STD	0200		181	340		258		0021	807	0.6	0.8		988								
	18	f	OBS	T0202 0250		172	340		258		0010					985								
			STD	0300		057 945	340		261		0019			11		953 921								
	18	7	OBS	0301		943	340		263		0017	412	00	04		920								
	10	1	STO	0400		748	340		265		0015	2 2	0.9	67		862								
	18	7	OBS	0401		746	339		265		0015	2))	0,	0 1		861								
			STO	0500		598	340		268		0013	103	11	09		819								
			STO	0600	0	491	340	8	269	8	0011	506	12	32	14	793								
	18	7	OBS	0605	0	487	340	84	269	9					14	792								
			STD	0700		443	341		271		0010			41		791								
			STO	0800		404	342		272		0009	329	14	40		792								
	18	7	OBS	0804		403	342		272							793								
			STD	0900		376	343		273		0008			29		798								
	18	7	STD 08S	1000 1009		350	344	-	273		0007	לכו	16	09		805 805								
	18	1	STD	11009		330	344		274		0007	301	1.6	85		813								
			STD	1200		312	344		274		0006			56		823								
			STD	1300		294	345		275		0006			22		832								
			STD	1400		278	345		275		0006.			86		843								
			STO	1500		262	345		275		0005			47		853								
	18		OBS	T1514		260	345		275							854								
	21	0	OBS	T1747		228	345		276							880								
			STD	1750		228	345		276		0005			90		881								
	2.	0	STD	2000		209	345		276		0005	435	2.2	26		915								
	21	0	OBS	2254		191	345		276		000	C / C	2.	0.3		950								
	2.1	0	STO	2500		174	346		277		0004	069	24	83		986								
	21	· U	OBS STD	2757 3000		161	346 346		277		0004	u 7 E	2.7	17		025 063								
	21	0	085	T3265		150	346		277		0004	71)	21	17		108								
	2 1			12203		100	240	,,,	C 1 1	J					1)	100								

REFER	ENCE				- «	MARSO		STATION TH	ME			NATOR		OEPTH TO	OFFILE	085	WAVE ERVATIONS	WEA-	CLOUG		51	ATION	
CTRY	10.	CODE	LATITU	DE L	ONGITUDE E			(GMT)		EAR	CRUISE NO.	STATIO		80110/	OF S'MPL"	DIR.	HGT PER SE	COOE	TTPE A AAT		N1	IMBER	
CODE	NO.	1000		1/10	1/10	10"	1° N	AO DAY HE					-	. 05		33	3 3	01	6 7			0015	
31	1163	3 PW	3001	N 1	4008 W	123				967		15		425	15	1 22	12121	1 01	1 0 1	1	- 1	0015	
' '			,				WATE	R W	INO	BARO)-	EMP. "	VIS.	NO.		CIAL							
						C	OOE 1	TRANS. OIR.	SPEED OR	M ETE		BU		OEPTH	2 ORZEKA	'A TION S							
						-	-	09	509	18		2	28 7	13									
								09	309	10	244	+-		_									5
		MESSEN	GR CAST	CARO	DEPTH (m)	т.	c	s °/	SIGMA	A-T	SPECIFIC VO	LUME VID7	₹ ∆ O	1. SO	LOCITY	02 ml/l	PO4-P pg + a1/1	TOTAL-P	NO2-N μg - αl/l	NO3-N yg - at/1	SI O4-Si µg = ai/1	pН	C
		HR 1/	g ND.	TYPE	Otrin imi	1					RNOMACI		X 10 ³	_ "			71					-	+
		TK 1/	10																l	1	l	I	1
		1	1	STO	0000	24	56	3502	235	1	00438	54	0000) 1	5338								
		2	16	OBS	0000	24		35022	235	1					5338								
		~	10	ST		24	50	3507	235	6	00434	04	0044		5339								
		2	16	OBS	0011	24	46	35070	235						5338								
		_		ST	0020	23		3505	237		00414		008		5322								
				ST			77	3502	240		00389	74	012		5299 5296								
		2	16	OBS	0031		66	35011	240		00331	2.2	019		5233								
				ST			19	3490 34894	246		00331	. 53	019		5231								
		2	16	OBS	0051		79	3462	250		00294	20	027		5167								
				STI			73	34618	250		0027-	-20	0 = 1		5165								
		2	16	OBS			39	3469	252		0028	103	034		5160								
				ST			37	34688	252					1	5159								
		2	16	OBS ST			65	3446	254		0025	943	041	6 1	5108								
				ST			07	3427	256		0024	107	047	9 1	5059								
				ST			60	3402	259	92	0021	355	059		4981								
		2	16	OBS	_	11	44	34006	259	94					4976								
		_		ST		10)47	3405	26	15	0019		069		4950								
				ST	D 0300	0 °	947	3406	26		0017	544	078	-	4921								
		2	16	085			933	34064			0015	, 70	006		.4917 .4868								
				ST			765	3400	26		0015	4 / 8	095		4865								
		2	216	OBS			753	33999			0012	407	109		48821								
				ST			504	3400	26		0013		142	_	14792								
				ST			490	3405	26		0011	111	1-2		14789								
		2	216	OBS			478	34058 3416	26° 27		0010	414	133		14790								
				ST			441 404	3426	27		0009		143		14792								
			22.6	ST			400	34277			0007				14793								
		4	216	ST			377	3435	27		0008	433	152	20	14799								
				51			353	3442		39	0007	715	160		14806								
			216	089			349	34428							14808								
				51			331	3444	27	43	0007		16		14814								
				51		0	310	3446		47	0007		174		14822								
				51		0	292	3448		50	0006		18		14831								
				51	TD 1400		275	3450		53	0006		18		14841								
				S*	TD 1500		260	3452		56	0006	193	194		14852 14855								
			216	OB:	S T1533	3 0	256	3453	1 27	57					T-4032	′							

REFERENCE		_ E M	ARSOEN	STATION TIM		ORIGINATO	R*S	OEPTH	MAX. OEPTH	0.00	WAVE	WEA-	CLOUG			NODC	
CTRY 10. COOF		NGITUOE BB S	DUARE	(GMT)	YEAR	CRUISE STAT		TO BOTTOM	OF		RVA TIONS	THER	CODES		2	TATION	
CODE NO.	1/10	1/10 = 10	. 1.	MO DAY HR.	1/10	NO. NUM	MEK		S'MPL'S		HGT PER SE			-			
311163 PW 3	009 N 14	002 W 12			02 1967			4526	15	32	2 3	01	666	1	t	0016	
			WAT	ER WI	SPEED BAR		VIS.	NO. OBS.	SPEC								
			COLOR	TRANS. DIR.	OR (mb		JLB COD	DEPTHS	O8SERV/	ATIONS							
				10	509 22	4 233 2	28 7	13									
							₹ △ 0		UNO		PO 4-P	TDTAL-P	NO2-N	NO3-N	5104-5	T .	s
	AST CARO ND. TYPE	OEPTH (m)	T °C	5 */	SIGMA-T	SPECIFIC VOLUME	X 10 ³	le lucie	DCITY	O2 ml/l	yg = at/1	µg = 01/1	μg = αl/l	µg - a1/1	μg - α1/	рН	C
							ļ		-							!	11
'	` STD	0000	2435	3506	2360	0042965	0000		333								
201	OBS	0000	2435	35062	2360				333								
201	OBS	0009	2429	35061 3506	2362	0042748	0043		333								
	STD	0010	2426	3507	2378	0042746	0089		323								
201	STD OBS	0028	2313	35080	2398	0041330	000		308								
201	STD	0030	2286	35Ú8	2405	0038787	0129		302								
201	OBS	0047	2072	34989	2458			15	248								
	STD	0050	2034	3494	2465	0033223	019	7 15	238								
201	OBS	0071	1805	34653	2501			15	174								
	STD	0075	1796	3465	2503	0029600	027		172								
	STD	0100	1724	3461	2518	0028304	0348		154								
	STD	0125	1633	3452	2532	0026989	041		130								
201	OBS	0145	1544	34427	2545		01.0		104								
	STD	0150	1513	3438	2548	0025490	048		095								
201	OBS	T0193	1277	34082 3408	2575 2580	0022569	060		013								
	STD STD	0200 0250	1250	3408	2612	0019616	070		+962								
201	085	0290	0973	34068	2629	0017010			929								
201	STD	0300	0958	3406	2631	0017822	080	2 14	925								
201	085	10390	0817	34025	2650			14	+887								
201	STD	0400	0795	3403	2654	0015733	097	0 14	+880								
	STD	0500	0610	3402	2679	0013334	111		+824								
201	OBS	0584	0508	34016	2691		_		+796								
	STD	0600	0506	3404	2693	0011985	124		+798								
	STD	0700	0487	3417	2705	0010893	135		+809								
201	oBs	0778	0461	34250	2715	0000745	1 /. 5		+812 +810								
	STD	0800	0447	3427 3435	2718 2730	0009765	145 155		804								
201	STD	0900	0354	34402	2738	0000004	177		4802								
201	0BS STD	0976 1000	0350	3442	2740	0007681	163		4805								
	STD	1100	0333	3447	2745	0007189	170		4815								
	STD		0316	3451	2750	0006769	177		4825								
	STD		0299	3454	2754	0006417	184		4835								
	STD		0283	3455	2756	0006209	190		4845								
201	085	T1457	0273	34556	2758			14	4850								

			_							_																
REFE	RENCE	SHIP						ARSDEN	STA	TION T	AA E		_	ORIGIN	ATOR'S		DEPTH	MAX.	. 1	WAVE	WEA-	CLOUD			NODC	
CODE	ID.	CODE	LATITU	- 1	FON		55	DUARE		IGMTI		YEAR	CRUIS		OITAT	4	BOTTON	, OF	1	2MOIT AVR32	THER	CODES	1	S	UMBER	
-				1/10		1/10	= 10		MO	DAY	R,1/10		NO.		IU M BE	K		S'MPL'	S DIR.	HGT PER SEA		TYPE AM	1			
31	1163	PW	3001	18N	140	0019W	12	3 00	09	19	198	1967	NO S	01	7		4389	15	30	3 3	01	1713		-	0017	
								W.A	TER	1	UNIV	BAR	o- L	AIR TE	UP. °C	VIS.	NO.	5 9 6	CIAL							
								COLOR	TRAN	S. DIR.	SPEED			DRY	WET	COD		COLCON	ATIONS							
								CODE	(m)	-	FORCE	_	-	ULB	BULB	_	-	1								
										09	511	22	0 2	256	22	8 8	14									
		MESSENGE	CAST	CAF	RD			* to		/	T		SPECIFI	C VOLU	ME	₹ ∆ D	so	UND		PO 4-P	TOTAL-P	NO2-N	NO3-N	51 04-51		5
		TIME HR 1/10	NO.	TYF		OEPTH I	ni j	T C		s */	2167	v A –T	ANDA	ALY-RI	07	X 10 ³	, AET	OCITY	O 2 ml/	µg + α1/1	µg = a1/1	µg ≈ σ1/1	μg - α1/i	μg - σ1/1	pН	0
		77K 7710	+	-	-		_		+-		-				\rightarrow											
		1	1	١ ,	TD	0000)	2453	1 25	510	1 22	58	00.	318		0000	1 16	338 5338		1			l	t	1	
		19	Ω.	OB		0000		2453		5103	23		000	+218	4 1			338								
		19		OB		000		2444		5100	23							338								
		17	0		TD .	001		2433		510		64	004	265	1 (0043		335								
					TD	002		2329		513		97		3958		0084		5312								
		19	8	OB		002				5153				,,,,				712								
					TD	003		2229		13	24	25	00	687	8 (0122	1 1 5	5288								
		19	8	08	S	004	9	2052	34	878		55						5242								
				S	TD	005)	2043	34	89	24	58	00	3381	4	0193	1 :	5240								
		19	8	08	S	007	3	1851	34	918	25	10					1.5	5191								
				\$	TD	007	5	1838	34	89	25	11	00	884	9	0271	1:	187								
		19	8	OB	S	009	3	1691	34	+620	25	26					15	5144								
				S	TD	010)	1677	34	+60	25	28	00	2731	1 (0341	1 1 9	5140								
					TD	012	5	1517	34	438	25	48	007	2550	3 (0408	3 15	5092								
		19	8	OB		014				216																
					TD	0150		1377		+21		64	00	2394	5 (0469	9 1:	049								
					TD	020		1157		+01		92	00	2137	4	0583		980								
		19	8	QB.		020		1153		+009	25							+979								
					TD	0250		1056		08		16		1920		0684		+953								
		1.0	0		TD	0300		0958		10		34	00.	753	י כ	0776		+926								
		198		QB.		0300 T039		0958		1099 1007		34						926								
		198	0		S TD	0400		0767		007		56 57	0.0	543	3	0941		+870 +869								
					TO	050		0621		01		77		355		1086		828								
					TD	0600		0513		+01		93		199		1213		801								
		198	Я	0B.		060		0512	-	051		93	00.	177	,	1 - 1 2		801								
		17	0		1D	070		0456		16		08	0.0	059	2	1326		4796								
		19	R	0B		079		0411		248		20		.007	Eu.	(795								
		1 91			TD .	080		0411		25		20	004	947	3	1427		4795								
					TD	090		0381		433		29		862		1517		800								
					TD	100		0355		441		38		784		1600		4807								
		19	8	OB		100		0355		4405		38			-	(4807								
					TD	1100		0332		446		45	0.00	725	1	1679		4814								
					TD	120		0311		451		51		670		1745		4823								
					TD	130		0293		+54		55		634	-	1810		4832								
					TD	140		0278		155		57		615		1873		843								
		19	8	QB		T149		0267		1559	27							4854								
		- / (_	, , , ,)	to 1	- 0						. 554								

REFERENCE	SHIP			- 4	MARS	DEN		N TIME			ORIGIN	ATOR'S		OEPTH	MAX. OEPTH		WAVE	WEA-	CLOUD		1	ODC	
CTRY IO.	COOE	LATITUDE	FON	GITUOE HE	SOU.			W.TI		EAR		TATION		TO MOTTOR	OF	000	SERVATIONS	THER	COOES			MOITA	
		1/10		1/10 ==	10"		MO OA								S'MPL"		HGT PER SI		TYPE A.M				
31 1163	B PW	29595N	140	0025W	087		09 20			967			, [4206	15	34	3 3	01	7 5			0018	
					-	WAT	ER	WIN	_	BARC			VIS.	NO. 085.	SPE	CIAL							
						COLOR	TRANS.	DIR.	OR ORCE	M ETE		BULB	CODE	OEPTHS	OBSERV	2 NOIT A							
					ŀ				18	17		222	8	14									
							ļ'	01 0	10	- I	7 230			1 4									
	MESSENGR TIME C			OEPTH (m)	т	°C	5 .	.	SIG M A	-T	SPECIFIC VOLU	ME S	△ 0 rN. M.	SOU		O 2 ml/l	PO4-P	TOTAL-P	NO ₂ -N	NO3-N	51 0 4 - 5:	рН	S
	HR 1/10	NO. TY	PE								ANOMALY-XI	,	x 10 ³	VELO	CHY		µg + a1/1	µg + a1/1	yg − o!/	μg - σ1/!	μg = 01/l		c
																							11
	1	' S	TD '	0000	2	437	351	2	236	4	004261	8 0	000	15	335								
	197		S	0000		437	351	18	236	4				15	335								
	197	7 08	35	0009	2	429	351	16	236	6				15:	334								
			TD	0010		418	351.		237		004213		042		332								
			TD	0020		310	351.		240		003915		083		307								
	1.0-		TD	0030	2	208	351		2431	0	003643	0 0	121	15.	283								
	197		510	0033	2	023	351 348		246	,.	003330	7 0	191	16	234								
	197			0051		014	348		246		003330	, 0	141		232								
	171		7D	0075		823	347		250		002921	9 0	269		181								
	197			0077		811	347		251		002721	, ,	-0,		178								
			TD	0100	1	706	346		252		002755	9 0	340	15	149								
	197	7 OE	35	0100	1	706	346	56	252	5				15	149								
			CTO	0125		591	344		253		002643		407		116								
			STD	0150		469	343		255		002508	1 0	472		080								
	197			0151		464	343		255						078								
	1.0-		0.0	0200		202	340		258		002204	4 0	589		996								
	197		STD	T0202 0250		193 088	340		258		001960	ρ 0	694		993 965								
			STD	0300		989	341		263		001788		787		938								
	197			0302		985	341		263		001700	0 0	101		937								
			STD	0400		819	340		264		001620	1 0	958		889								
	197	08	S	0404	0	813	340	05	264	9				14	887								
		5	STD	0500	0	647	340	2	267	4	001379	7 1	108	14	839								
			TD	0600		520	340		269		001213	5 1	437		804								
	197			0606		514	340		269			_	2 - 0		803								
			STD	0700		459	341		270		001070		352		797								
			STD	0800		413	342		271		000958	2 1	453		796								
	197			0810		409	342		272		0000/5		c		796								
			510	0900		383	343		272		000865	-	544		801								
	197		STD	1000		357 354	344		273 273		000790	7 1	627		808 808								
	171		5TD	1100		333	344		274		000743	2 1	704		815								
*			STD	1200		312	344		274		000743		776		823								
			STD	1300		293	345		275		000666		844		832								
			STD	1400		277	345		275		000631		909		842								
			STD	1500		263	345		275		000597	8 1	971		853								
	197	7 OE	35	T1524	0	260	345	65	276	0				14	856								

REFEREN	CE SHIP			NGITUDE BOUTED	MARSDEN	STATION TH		ORIGI	ATOR'S	DEPTH	MAX.	WAVE	WEA-	CLOUD			NODC	
CTRY 10	o. coo			NGITUDE BA	SQUARE	(GMT)	YEAR		STATION	BOTTOM	OF	OBSERVATIONS	COOE	CODES			STATION NUMBER	
		2001	1/10			MO DAY HE				1	13 WLF 2	R MGT PEP SE	^-	TIPE AM	1			
3 1 1 1	63 PW	2901	N 14	006 W	087 90 WAI		17 1967		MP. ℃	4846	14 (1 3 3	02	7 8			0019	
					COLOR		SPEED AAST	0-	WET COS	cd U83.	SPECIAL							
					COOE	IRANS. OIR.	FORCE (mb		BULB	SHITABO	OBSERVATIO	42						
						02	517 16	9 239	222 8	14								
	MESSET	YGR CAST	CARO	T				SPECIFIC VOL	IMF & A		UNO O-	80. 0			110			s
	HR 1/	f at NO.	TYPE	OEPTH [m]	T °C	s *4.	SIG MA-Y	ANOMALY-X		A. 1	OCITY 02	PO4-P pg - 01/1	TOTAL-P	NO2-N pg - at/1	NO ₃ -N 1/10 - 94	S1 O4-S ug = 01/		c
	10 8 17	10								_								Н
	1	1	STO	0000	2480	3536	2369	004214	45 000i	n 15	348			j			1 1	1
	2	17	OBS	0000	2480	35355	2369	00 121	.,		348							
	2	17	085	0009	2478	35355	2370				349							
			STD	0010	2470	3536	2372	004189	96 004	2 15	347							
			STD	0020	2385	3536	2398	003950	008	3 15	328							
	2	17	OBS	0029		35357												
	7	. 7	STO	0030	2294	3534	2423	003713	31 012		307							
	2	17	OBS STD	0045	2144	35087 3501	2446 2460	003361	0 019		268							
	2	17	085	0069	1872	34841	2499	003361	10 019		248 195							
	-	11	STO	0075	1855	3486	2505	002947	73 027		191							
	2	17	085	0090	1816	34896	2517				183							
			STD	0100	1801	3489	2520	002808	35 034		180							
			STD	0125	1754	3486	2530	002729	58 041	2 15	170							
	2	17	OBS	0134	1734	34850	2534				166							
			STD	0150	1695	3478	2538	002656	66 047		156							
	2	17	OBS STD	T0178 0200	1613 1498	34656 3451	2547	003/3	70 060		134							
			STD	0250	1277	3425	2562 2588	002437			100							
	2	17	085	0271	1201	34182	2597	002170	012		009							
	_	- '	STD	0300	1131	3416	2609	002003	37 082		989							
	2	17	OBS	T0364	0986	34123	2631				947							
			STD	0400	0901	3408	2642	001699	2 101	2 14	921							
			STD	0500	0702	3401	2666	001469	8 117	0 14	860							
	2	17	OBS	0553	0620	34004	2676				836							
			STO	0600	0570	3405	2686	001271			825							
	2	17	STD	0700 0741	0484 0457	3415 34195	2704 2711	001100)5 142		807 804							
	۵	1,	STD	0800	0437	3426	2711	000971	18 152		806							
			STD	0900	0406	3435	2729	00097			811							
	2	17	OBS	0927	0398	34368	2731	30001	102		812							
			STD	1000	0377	3442	2737	000799	5 170		816							
			STD	1100	0351	3447	2744	000739	98 178	3 14	823							
			STD	1200	0327	3451	2749	000689			830							
			STD	1300	0306	3453	2753	000656			838							
	2	1.7	STD	1400	0287	3454	2755	000635	6 198		846							
	2	17	OBS	1400	0287	34537	2755			14	846							

REFERENCE	SHIP			# C	MARS		STATE	ON TH	M E	WF A A	L	ORIGIN.			DEPTH	DEPTH		WA'	VE LTIONS	WEA-	CLOUD		1 5 1	ATION	
CTRY ID.	CODE	LATITUDE	.	NGITUDE BO	SQU			IAY HI	1110	YEAR			TATION		TO BOTTOM	S'MPL			PER SEA	CODE	TYPE AM		NI	JMBER	
			/10	1710	10°			$\overline{}$			+-					-									
31 1163	PW	3004	N 1	4006 W	123					1967	N	09 02			4343	15	35	2	3	01	8 3	1	1 1	0020	
						WAT		W	INO	BAR		AIR TEA		V15.	NO. OBS.		CIAL								
						COLOR	TRANS.	DIR.	SPEED	MET!		DRY BULB	WET	CODE	DEPTHS	OBSER!	/A TION S								
					+	0000		07	FORCE	+	-			0	7.0	-		1							
							_	06	518	20	2	250	222	8	14			Ц.							٦
	MESSENGR	CAST	CARO	DEPTH (m)		℃	,	٠/	SIGN	A-T	SPE	CIFIC VOLU		YN, M		UND	O2 ml/			TOTAL-P	NO2-N	NO3-N	\$1 04-51	pН	S
	HR 1/10	NO.	TYPE	DEFIN WIT	1	_	1		3,0,0		AP	NOWALY-X)	٥′ ٥	X 103	. VEL	OCITY		μç	- 01/1	μg = a1/1	ид - at/1	µg - al/t	µg - a1/1		C
	110, 1710								1																ı
			STD	0000	2	423	35	15	23	7.0	۱۵	04201	8 0	000	15	332		1				,			
	194		OBS	0000		423		146	23							332									
	1,74		STD	0010		417	35		23		0	04190	1 0	042	15	332									
	194		OBS	0010	2	417	35	144	23	72					15	332									
			STD	0020	2	409	35	14	23	74	0	04176	5 0	084		331									
			STD	0030	2	401	35		23		0	04162	2 (125		331									
	194		085	0032		399		127	23							331									
			STD	0050		049	348		24		0	03403	2 (201		241									
	194		OBS	0050		049		881	24					_		241									
			STD	0075		867	34		25		0	02900	0 (280		196									
	194		OBS	0076		860		968	25							194									
	194		OBS	0099		703		696	25		_	0 7716	0 (1250		149									
			STD	0100		696	34		25 25			102715 102572)350)416		147									
	10/		STD	0125		541 410		229	25		V	102312	0 (7710		060									
	194	'	OBS	0148		399	34.		25		_	02431	1 ()479		5056									
	194		STD OBS	T0198		167		014	25		U	102431	1 (, , , ,		983									
	174		STD	0200		162	34			92	0	02139	1 ()593		982									
			STD	0250		051	34		26			01926	_	1695		951									
	194		OBS	0298		953		079	26							+924									
	1,7		STD	0300		949	34			34	-0	01754	4 (787	14	+922									
	194		OBS	0398	0	777	34	016	26	56					14	873									
			STD			773	34			57	C	01544	6 (952	14	+872									
			STD			608	34	02		79	C	01330	8	1095	14	4823									
			STD	-		492	34	05	26	96	C	01171	1	1220) 14	4793									
	194		OBS	0600	0	492	34	054	26	96						4793									
			STD	0700	0	449	34	16		09		01050		1332		4793									
			STD			412	34			20	C	00949	7	1432		4795									
	194		OBS	0803		411		252		20						4796									
			STD			383	34			29		000865		1522		4801									
			STD		_	356	34	-		38	0	00789	8	1609		4807									
	194		OBS	1009		354		409		38						4808									
			STD			332	34			45		00725		1681		4814									
			STD			311	34			51		000670	_	1751		4823									
			STD			292	34			55		00633		1816		4832									
			510			276	34			58		000605		1878		4842									
			STO			262		56		59	(000595	2	1938		4853									
	194	+	OBS	T1538	C	258	34	563	21	60					1 4	4858									

TABLE VI. Observed and interpolated oceanographic data for stations taken by USCGC TANEY at Ocean Station NOVEMBER, 15 October-5 November 1967, prepared from NODC Listing No. 31-1178 RT.

REFER	ENCE	53415			- =	MARSDE		STATION T			ORIGIN	ATDR'S		DEPTH	MAX.		WAVE	WEA-	CLDUD		ħ	DDC	
CUSA	10.	CDDE	LATITU	- 1	DARIFT TO SELECT	SDUAR		(GMT)		YEAR		TATION		TD OTTON	OF		SERVATIONS	THER	CDDES		ST	ATION	
ODE	ND.			1/10	· 1/10 P =	10°	1" /	MD DAY	R,1/10		NO. I	UMBER		01107	" S'MPL"	S DIR.	HGT PEP SE	A CODE	TYPE AM	†	111	JWIBEK I	
31	1178	RT	2943	N 1	4000 W	087	90	10 15	239]	1967	N10 00	1	4	755	15	09	3	X1	8 5			0001	
							WAT	ER \	VIND	BARE	AIR TE	MP. °C	T	NO.	T								
								TRANS. DIR.	SPEED	METE	R DRY	WET	CODE,	DBS. DEPTHS	DECED	CIAL /ATIONS							
						С	DDE	lm)	FORCE	(mbs) BULB	BUTB		Jerins	1								
								09	516	19	0 244	233	7	14									
		MESSENGR								_		3	ΛD	1			00 0						5
		TIME	NO.	CARD	DEPTH (m)	T *(s %.	SIGM	A-T	ANOMALY-XI	07	∆ D YN. M. x 10 ³		DCITY	D 2 ml/l	PO4-P	TOTA L P	NO2-N vg - a1/1	ND ₃ -N μg - αl/l	\$1 D4-51 µg - 01/1	pН	c
		HR 1/10	-	!				-	-			-	X 10°	-									\mathbb{H}
					+	_		1	1					1									
		22		STD	0000	231		3525	238		004027	7 (000		325								
		23		OBS	0000	23		35254	238						325								
		239	7	OBS	0009	23		35254	238		00100				326								
				STD	0010	23		3525	238		004031		040		326								
				STD	0020	23		3526	238		004038		081		328								
		2.0		STD	0030	23		3526	238		004044	9 (121		330								
		239	9	OBS	0032	231		35257	238						331								
		224		CTS	0050	21		3500	243		003635	0 (1198		275								
		239	9	OBS	0050 0075	21		34999 3471	241		002111	, ,	202		275								
		23	0	STD	0075	18		34710	248		003111	4 (282		196								
		239		08S 08S	0075	17		34681	248 251						162								
		25	7	STD	0100	17		3466	25		002819	9 0	1356		158								
				STD	0125	16		3450	25		002651		1425		121								
		23	0	OBS	0143	15		34375	254		002011	7	1425		092								
		23	7	STD	0150	14		3431	259		002499	0 (1489		079								
		23	0	OBS	0190	12		34055	25		002434	7	1 10 7		011								
		2)	,	STD	0200	12		3406	258		002210	a r	1607		001								
				STD	0250	10		3409	26		001937		711		+958								
		239	Q	OBS	0288	0.9		340.95	26:		001/37		, , , , ,		931								
				STD	0300	09		3408	263		001761	0 0	1803		924								
		230	Q	OBS	T0383	08		34022	269		001,01				+882								
				STD	0400	07		3402	265		001545	4 (1968		+872								
				STD	0500	06		3401	26		001336		112		823								
		23	9	OBS	T0567	05		34007	268						+801								
				STD	0600	051		3405	269		001186	2]	238		+797								
				STO	0700	04	41	3417	27	11	001034		349	14	+790								
		23	9	OBS	0742	04	20	34213	27	16				14	789								
				STD	0800	04	01	3427	27	23	000922	0	447	14	4791								
				STD	0900	03	70	3435	27:	32	000835	2	535	14	1796								
		23	9	OBS	T0940	03	59	34378	27:	35				14	798								
				STD	1000	03	44	3442	27	40	000761	2	615	14	+802								
				STD	1100	03		3447	27	46	000705	0 :	688	14	+810								
				STD	1200	03		3451	279	51	000660	4	757	14	+819								
				STD	1300	02		3454	27!		000627		821	14	+830								
				STD	1400	02		3455	279		000613	2 :	883	14	+842								
		231	9	OBS	T1480	02	70	34556	275	58				14	+853								

REFERENCE						MARSOE		STATION	TIME			О	PIGIN.	ATOR'S		DEPTH	MAX.		WAVE	WEA-	CLOUD		, N	ODC	
CTRY IO.	COOE	LATITU)	LONGITUDE	12 51	SOUARE		(G M T			AR	CRUISE		TATION		BOTTON	. OF	00.	SERVATIONS	THER	COOES		ST	ATION UMBER	
CODE NO.			1/10	1/10	=	10"	1 /	MO DAY	HR,1/10	0		NO.		UMBER		-	S'MPL'	S DIR	MGT PER SE	A	TYPE AM	-			
311178	RT	3001	5N	140023W	1	23 0	0	10 16	199	19	967	N10	00	2		4755	14	06	3	X1	66			0002	
							WAT	ER -	WIND		BARC	A	IR TEA	и Р. °С	T	NO.	C DC	CIAL							
								TRANS. OIR	SPE	ED	METE	R C	DRY	WET	COD!	OBS.	OREEDI	A TION S							
						CC	BOE	[m)	FOR	CE	(mbs) Bi	UL8	BULB	-	OFFIRS									
								0.8	50	8	201	0 2	50	222	7	14									
	MESSENGR							<u> </u>	1					5	ΛD		QNU		, PO4-P	TOTAL-P	NO N	NO3-N	SI O4-Si		2
		CAST NO.	CAR	OEPTH	(m)	τ °C		5 %.	12	GMA-	_T	SPECIFIC		07 0	YN. M	· VEL	OCITY	O 2 ml/	1 /10 + pt/1	μg - a1/l	NO2-N ug - a1/l	νg - o1/1	yg - 01/1	pН	C
1	HR 1/10													-	X 10 ³										41
																									1
			ST	D 000	0	237	75	3524	2	391	1	004	000	6 0	000	15	321								
	199	9	OBS	000	0	237	75	35237	7 2	391	1					15	321								
	199	9	OBS	000	9	237	72	35238	3 2	392	2						322								
			ST	D 001	. 0	237	72	3524	2	392	2	003	995	1 0	040	15	322								
			ST			237	71	3524	2	393	3	003	993		080		323								
			ST	.D 003	0	236	9	3524	2	394	4	003	991	5 (120		325								
	19	9	089	003	13	236	9	35245	2	394	4						325								
			\$1			216		3498		432		003	632	8 (196		273								
	19	9	OBS	005	2	214		34956	5 2	43	7						267								
			S1			185		3473		495		003	039	2 0	279		190								
	19	9	083			181		34710		503							179								
			\$1			176		3474		518		002	831	3 (1353		168								
	19	9	OBS			175		3474		520			70.	2 6			166								
			S1			165		3458		537			704		1422		137								
			S1			153		3440		546		002	572	6 (488		101								
	19	9	OBS			151		34370		548			25.0				094								
			\$1			123		3406		580		002	250	9 (1609		009								
	19	9	089			120		3403	_	585		000		2 /	710		998								
			S1			110		3406		605			022		715		+972								
			S1			099		3410		628		001	816	2 (811		+941								
	19	9	OBS			098		34108		630							+936								
			S1			079		3402		654		001	574	0 (981		+879								
	19	9	089			07		3401		655			0.0.	_	100		875								
			S1			060		3402		67		001	329	5 .	.126		+823								
	19	9	083			048		34066		69					2.5		789								
			S1			048		3407		691			147		. 250		789								
	1.0		SI			0.41		3419		71:		00.1	013	5 .	358		788								
	19	9	083			040		3428		72		000			~ .		791								
			S.			040		3429		72			907		454		4791								
		_	S			03		3437		73		000	1830	0 .	54]		4800								
	19	9	OB:			036		34420		73			7.				4806								
			S.			035		3443		740			768		621		4808								
			S			03:		3448		74			713		695		4816								
				120		03		3452		75			1666		1764		4824								
				TD 130		029		3455		75			625		829		4832								
			5			02		3456		75		000	600	1 .	890		4840								
	19	9	OB:	5 T14	00	026	50	3456.	3 6	75	y					1 4	4844								

REFER	ENCE	51110				<u>~</u>	MARSDEN	STATION 1	IME		01	IGINA	TOR'S		DEPTH	MAX. DEPTH	Γ	WAVE	WEA-	CLOUD		1	ODC	
CTRY	10.	CODE	LATITU		LONGITUDE	DARK	SOUARE	IGMT)		YEAR	CRUISE		ATION		TD MOTTOB	OF		ERVATIONS	THER	CODES			ATION !	
CODE	NO.			1/10	1/10		10° 1°	MO DAY	IR,1/10		NO.	N1	UMBER			S'MPL"	DIR.	HGT PER SE	A	TYPE AM	-			
31	1178	RT	3000	8N]	139597W		122 09	10 17	196	1967	N10	003	}		4531	16	07	3	X1	6 6			0003	
							W	TER	MIND	BAR	Al	R TEM	P, °C	VIS.	NO.	SPE	CIAL							
							COLO	TRANS DIR.	SPEED	44			WET	icand	OBS. DEPTHS		ATIONS							
							0008		FORCE	-		-		-										
								07	505	20	0 23	9	233		14									
		MESSENGR	CAST	CARD	DEPTH	im 1	т *с	s */	2164	MA-T	SPECIFIC	VOLUN	E S	Δ D.		ONU	O2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	SI O4-SI	рН	S
		HR 1/10	NO.	TYPE	00.777				1107		ANOMA	LY-X10	´ Š	103	VETO	CITY		μg - α1/1	ا/۱۵ - وبر	μg + σ1/l	μg - a1/l	νg - σl/l		C
		I	' '	STE	000	0	2367	3522	23	92	0039	912	2 0	000	15	319		'						
		196	6	OBS	000		2367	35219		92					15	319								
				ST	001	0	2366	3522		93	0039	915	0	040	15	320								
		19	6	OBS	001		2366	35220		93						320								
				ST			2366	3522		93	0039			080		322								
				STE			2365	3522		93	0039	1970) ()	120		323								
		19	6	OBS	003		2365	35220		93	0036			100		324								
		19	,	STO	005		2128	3501 34972		44	0035	1139	9 0	195		264 252								
		191	0	OBS			1939	34912		87	0031	15	2 0	278		216								
		19	4	OBS	008		1892	34884		97	005	. 1)	. 0	210		203								
		1 7	0	ST			1809	3484		15	0028	3608	5 0	352		182								
		19	6	OBS	010		1778	34821		21	002	,000		J) L		174								
		+ / !		ST			1732	3475		26	0027	7549	9 0	423		162								
				STO			1640	3462		38	0026			490		137								
		19	6	OBS	016	0	1594	34557	25	44					15	124								
				STI	020	0	1329	3419		73	0023	327	7 0	615		041								
		19	6	OBS	T021		1252	34095		81						016								
				ST			1132	3409		03	0020			724		980								
		10	,	STI			0989	3408		27	0018	3182	2 0	821		937								
		19	6	OBS STE	031		0944	34075 3401		34	0019	70/	. 0	990		923 878								
		19	4	OBS	TO 42		0753	34003		58	001.	, , ,	+ 0	270		867								
		1 71	0	ST			0619	3401		77	0013	3526	5 1	137		827								
				ST			0491	3406		96	001			263		793								
		19	6	OBS	T061		0474	34073		99						789								
				STI	070	00	0436	3417	27	11	0010	28	1 1	373	14	788								
				ST	080	0	0399	3427		23	0009	919	7 1	470		790								
		19	6	OBS	082		0391	34297		26						792								
				ST			0378	3436		32	0008			558		799								
				ST			0360	3443		40	000.	772.	2 1	638		809								
		19	6	OBS	T103		0353	34451		42	200	721	0 1	713		813								
				STI			0341	3447		44	000			785		818								
				STI			0304	3449 3451		48	0000			854		828 837								
				STO			0286	3453		55	0000			919		846								
				STI			0267	3456		'58	0000			981		855								
		19	6	085	T158		0250			61	0000		, I	01		862								
		1.7		003	1170	, ,	0230	57510	21	01					1 4	002								

						,																		
REFERENCE	SHIP	LATITU	n. 1	LONG	SITUDE	TE SI V	ARSOEN SQUARE	STATIO	N TIM		YEAR		GINAT			DEPTH	MAX, DEPTH	0.00	WAVE	WEA-	CLOUD			NODC
CODE NO.	COOE		1/10	LONG	1/10	0 7 [0° 1°	MO OA		1	TEAR	CRUISE NO.	STA	TION		BOTTOM	0.5		HGT PER SE	THER	TYPE AM			NOITATE
31117	8 PT	2943		140			87 90		в о		967		004			4.207	-	1				1		
1 21/111	9 11 1	2,45	1.4	140	24 m	0		TER I	WII			AID	TEMP.	0/~		4297	15	34	3	X1	1614		- 1	0004
							COLOR			SPEED	METER				VIS.	NO. 085.		JAID						
							CODE		DIR.	FORCE	(mbs)			ULB	CODE	OBS. DEPTHS	OBSEKA	ATIONS						
									06	S15	230	23	9 ;	228	8	14								
A	MESSENGR					т-		1						_										
	TIME 0	CAST NO.	CAR		DEPTH (m)	T °C	S */		SIGM	A-T	SPECIFIC V		DY	A D	SOI VEL	DOLLA	02 ml/l	PO4-P pg = a1/1	101AL-P pg - 01/1	NO2-N PB - 01/1	NO3-N	\$1 O4-\$ pg - 01/	
	HR 1/10													X	103				71		pg - 0///	1\to - gu	pg - 017	
					000		2001		_		_			١.,										
	043		OB:	TD	0000		2381	352		239		0039	951	00	000		323							
	043		0 B	-	000		2381	3526 352		239							323							
	043			TD .	0010		2373	352		239	-	0039	7/.1	CI	J 4 O		322 322							
				TD	002		2372	352		239		0039		-	180		324							
				TD	003		2371	352		239		0039			119		325							
	043		OB:		003		2371	3526		239		0000	000	٠.	- 1 /		326							
			S	TD	005	3	2072	350	3	246	1	0033	543	0.1	193		249							
	043		DB:	S	005	1	2059	350	17	246	4					15	246							
			S	TD	0075	5	1873	349	3	250	6	0029	398	02	271	15	197							
	043		OB:	S	0078	8	1855	349	21	250	9					15	193							
				TD	0100		1753	3486	5	253	0	0027	140	0 -	342	15	166							
	043		0B		0100		1753	3486	52	253	0					15	166							
				TD	0125		1627	346		254	0	0026	202	04	+09	15	129							
				TD	0150		1493	3439		255		0025	034	04	+73	15	089							
	043		OB:		0150		1493	3438		255							089							
	0.40			TD	0200		1200	3403		258		0022	007	0 =	90		995							
	043		0B:	S TD	T0201		1195	3402		258		00.0					994							
	043		0B:		0299		1071	3408		261		0019	+61	06	94		959							
	043			TD	0300		0959	3409				0017		0.7	707		927							
	043		OB:		T0398		0781	3400		263 265		0017	517	0 1	787		926 874							
	045			TD	0400		0777	3401		265		00156	5 N B	0.5	953		873							
				TD	0500		0604	3403		268		0013			97		822							
	043		0B:		T059		0493	3404		269		0013	- 1 1	1.	, , ,		792							
				TD	0600		0488	3409		269		00116	592	1 4	222		791							
			Š	TD	0700)	0440	3416		271		0010			332		789							
	043		0B	S	0790)	0406	3425	55	272							791							
			S	TD	0800)	0404	342	7	272		0009	255	14	30		792							
			S'	TD	0900)	0380	3436	ó	273	2	0008			19		800							
	0 4 3		0B:	S	0983	3	0361	3441	19	273	9					14	807							
				TD	1000		0357	3443		274		00076			99	14	808							
				TD	1100		0335	3449		274		00070	_		73		816							
				TD	1200		0314	3453		275		00069			41		824							
				TD	1300		0293	3456		275		0006			305		833							
	0/-2			TD	1400		0273	3456		275		00060	124	18	66		841							
	043		OB:	5	T1451	L	0263	3456	2	275	4					14	845							

ERENCE	SHIP	LATITUD	E LO	DNGITUDE E	21	ARSDEN DUARE	STATION (GMT)	YEAR	I C K		ATOR'S TATION IUMBER		DEPTH TO OTTOM	DEPTH OF S'MPL'	OBS	WAVE SERVATIONS	CODE	CLOUD		5	NODC TATION TUMBER
-	7.0				10				-				1	20	1		-		-			
1 1178	RII	2949	N I	4013 W	0.8		10 19	188	196	7 N	10 00		- 4	1389	14	07	3	X 1	8 2	1	!	0005
						WAT		MINO		RO-	AIR TE		VIS.	NO. OB5.		CIAL						
						COLOR	TRANS. DIR	SPE O FOII	R I	TER bs1	DRY BUŁB	WET	CDDE	DEPTHS	OBSERY	ATIONS						
							06	_	-	40	250	239	8	1.4		-						
		r					100	, 30	7 2	40	200	237	0	14	L							
	WESSENGR TIME	CAST	CARO	OSPTH (m)		т °С	5 %.	12	GMA-T	SPE	CIFIC VOLU		△ 0 N, M,		סאט	0 2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	S1 O4-5	
	HR 1/10	T NO.	TYPE							_ ^	NOMALY-XI	, ,	103	VELO	OCITY		µg = 01/1	ug - 01/1	μg - σ1/l	Na - al/	µg = 01/1	
																						-
	1	1 1	STO	0000	1	2364	3529	2	399	. 0	03931	6 0	000	15	319		1	1	1	1	1	
	188	3	OBS	0000		2364	35290		399						319							
	188		035	0009		2364	35286		398						320							
			STD	0010		2364	3529		398	0	03938	6 0	39		320							
			STD	0020		2365	3528		398		03947		79		322							
			STD	0030		2366	3528		398		03954		118		324							
	188	3	OBS	0032		2366	35280) 2	397					15	324							
			STD	0050		2122	3498	2	444	0	03522	8 0	193	15	262							
	188	3	QBS	0050		2122	34976	5 2	444					15	262							
			STO	0075		1880	3478	2	492	0	03065	5 C	275	15	198							
	188	3	OBS	0078		1858	34764	4 2	497					15	192							
			STD	0100		1749	3473	2	521	0	02802	1 0	349	15	163							
	188	3	085	0100		1749	34728		521					15	163							
			STD	0125		1657	3461	2	534	0	102686	8 0	+17	15	138							
	188	3	OBS	0149		1546	34464		548						106							
			STD	0150		1539	3445		548	0	0 2 5 5 3	2 0	+83		104							
	188	3	OBS	T0199		1245	34053		579						011							
			STD	0200		1242	3405		579		02261		503		010							
	100		STD	0250		1085	3407		610	C	01979	8 0	709		963							
	188	3	OBS	0295		0964	34080		631			7 0	107		927							
	100	,	STD	0300		0953	3407		632	C	01766	7 0	303		924							
	188	,	OBS	T0397		0756	34004		658		01533		3 . 7		864							
			STD	0400		0750	3401 3402		659 681		01522 01307		109		863							
	3.0.0						34039			U	101301	1 1	109									
	188	3	OBS STD	T0585		0495	3406		694 697	_	01160	. 1	232		791							
			STD	0700		0438	3418		712		01100		342		789							
	100	,	OBS	0778		0407				Ĺ	101023	1 1	142		790							
	188	,	SID	0800		0407	34262 3428		721	0	000913	h 1	438		791							
			STD	0900		0372	3437		734		00913		525		791							
	188	2	OBS	0971		0353	34420		739	C	700022	1 1	-63		801							
	100	,	STD	1000		0346	3443		741	-	00756	8 1	504		803							
			STD	1100		0322	3446		746		00714		578		810							
			STD	1200		0302	3449		750		00675		747		819							
			STD	1300		0283	3452		754		00638		813		828							
			STD	1400		0268	3455		758		000604		875		839							
			010	1 +00		0 2 0 0	2422	~	, , , ,	0	700007	. 4	-12									

REFERENCE	SHIP				E E	MARSDE	N	STAT	ON TI	WE			ORIG	INATO	DR*S		DEPTH	MAX.		WA	AVE	WEA-	CLOUG			NODC	
CTRY 10.	CODE	LATITUE		ONGITUOE '1/10	INDC	10°		MO D	GMT)	0.1/10	YEAR	1	NO.	STA"			TO BOTTOM	0.0	0		T PER SEA	CODE	TYPE AM	-		UMBER	
-	0.7		1/10				_			189	196	7	N10 0			-	3658			-			8 3			0006	
31 1178	RT	2959	4N 1	40060W		187	WAT			TOA		_	AIR	TEMP.	'r I	_		16)) .	7 6	121	X1	013	1	- 1	0006	
						-	-	TRANS.		SPEED		A RO- ETER			_	VIS.	NO. OBS.		CIAL /ATION!								
							300	(m)	OIR.	FORC		mbsl	BULB		UL9		DEPTHS	00368									
									05	509	2	240	250	2	222	7	14										
	MESSENGR	T T	CARD		T					T		Τ,	SPECIFIC VO	1 1 1 2 4 E	₹ ,	Δ. M.	1 501	סאנ		Ή	PO4~P	TOTAL-P	NO ₂ -N	NO ₃ -N	SI 04-Si		S
	EIME	Y NO.	TYPE	OEPTH (m)	T *C	-	S	*/	ŞIG.	MA-T		ANDMALY-	-X107	DYI	1. M.		CITY	O ₂ ml		ug = 01/1	µg = 01/1	ا/اه - وبر	μg ~ a1/1	ug - at/1	pН	C
1	HR 1/10	+			-			1				+			<u> </u>		-				-						+
		1	STO	000	0	236	5.7	35	77	23	97	1	00395	15	1	00	1 15	319		1	- 1				ľ	1	11
	189	2	085	000		23			274		97		00000	10	00	,00		319									
	10	,	STE			23		35			99		00393	65	0.0	39		319				4					
	189	9	OBS	001		23			273		99							319									
			STO			23	62	35	21		393		00399	106	00	79	15	321									
			STE	003	0	236	63	35	16	23	889		00403	50	0 1	. 19	15	322									
	189	9	OBS	003		23																					
			STO			20		350	-		76		00321	48	0]	92	15	2 36									
	18	9	OBS	005		19			940		800	3	00305	7.0	0 -		1 6	7.01									
	7.0	0	STE	007		18		34	92 83Q		16		00283	70	0 2	267	10	184									
	18	9	08S			17		34			180	d .	00273	63	0.3	337	15	161									
	18	0	OBS	010		17			80Q		35()	0021.	0 5	0.	, , ,		101									
	10	2	SI			16		34			49		00253	84	04	03	15	126									
			ST			14		34			72		00232			+64		086									
	18	9	OBS	016	0	14	24	34	310	25	620	3															
			STO	020	0	12	14	34	39	26	11		00196	25	05	571	15	005									
	18	9	035	021		11	55																				
			ST			10		34.			24		00184			66		965									
	2.0	_	STU			09		34			32		00177	15	0	756		936									
	18	9	OBS ST	032		09		34	093		537		00155	70	0.9	923		923									
	3.0	0	OBS	T043		07			997		663		0015.	, , ,	0	, , ,		855									
	18	y	ST			06	_	34			578		00134	.52	1.0	068		828									
			STO			05		34			96		00116			194		798									
	18	9	OBS	T064		04			111		703				-	,		790									
	-		ST			04		34			711		00103	340	13	304	14	790									
			ST	080	0	04	03	34	26	27	722		00093	318	14	+02	14	792									
	18	9	OBS	086	1	03	85	34	316	27	728						14	795									
			STO			03		34			731		00084			+91	_	799									
			ST			03		34			739		0007	796	1:	72		809									
	18	9	OBS	T107		03			460		743		7.					816									
			STI			03		34			744		00073			548		819									
			STU			03		34 34			748 751		00070			719 788		828									
			ST			02		34			754		00064			100 354		846									
			ST			02		34			758		00060			916		856									
	18	9	085	T163		02			581		762		50000	,,,	-			868									
	10	1	003	, 100						-								500									

					, ,														_	_		
FERENCE	5HIP	LATITU	DE	LONGITUDE	F 20	MARSDEN	STAT	IDN TI	IME YEA		ORIGIA			DEPT	DEPT	H DB	WAVE	IS THE				NODC
Y ID.	CODE		1/10	* '1/1	NOC	10° 1°	MO			CK		STATH		BOTTO	M S'MP	:	HGT PER	CDC				TATION
11178	RT	3001		140015		123 00	-	_	183 190	-	10 00			445			3	X				0007
111110	,	2001		1,0010	. 1		ATER		VIND		AIR TE		-		1	2 32		1 ^.	1012	1		0007
						-	R TRANS	+	SPEED N	ARO-	DRY	W	VIS	4 Opp.	ADDEED	PECIAL						
						COL		DIR.	FORCE ((mbs)	8DF8	BU	.8	DEPTH	\$ 0000							
								08	505	260	239	2:	28 8	14								
	MESSENGR	CAST	CAR	0				-/		5.98	CIFIC VOLU	IME	₹ Δ D	5	DUND		PO4-P	TOTAL	P NO2-N	NO3-N	SI D4-SI	
	HR 1/10	약 NO.	TYP		(m I	1 °C	,	•/	SIG MA-		NOMALY-X		DYN. A x 10 ³	A	LOCITY	02 ml/l	yg - 01/			µg + a1/1	νg = a1/l	
														-							-	
		1	S1	D 000	0.0	2368	35	29	2397	1 0	03943	5	0000) 1	5320	1	!	1	1	I	1	1
	181	3	085			2368		289	2397		00,		0000		5320							
			S	D 001	0	2364	35	29	2399	0	03937	76	0039	9 1	5320							
	181	3	083			2364		287	2399					1	5320							
			51			2364			2398		03942		0079		5322							
		_	S1			2364			2398	0	03947	75	0118		5324							
	183	3	OBS			2364		284	2398		00				5324							
	18:	3	S1 083			2116			2449	U	03468	8 8	0192		5261							
	10.	3	51			2116		029	2449	0	02906	,	0 / 7		5261							
	183	2	089			1851		923	2511	U	02900) T	0272		5193 5191							
	10.		S1			1719			2528	0	02729	0	0343		5153							
	183	3	089			1710		710	2529		0212		034.		5151							
	10.		51			1639			2538	0	02639	5	0410		5133							
			51			1546			2551		02524		0476		5107							
	183	3	OBS			1534		493	2553						5103							
			51	020	0	1289	34	18	2580	0	02257	ò	0594		5027							
	18:	3	OBS	T020	8	1254	34	140	2584						5016							
			S1	D 025	0	1128	34	13	2607	0	02009	0	0700) 1	4979							
			51	TD 030	0 (0993	34	11	2629	0	01802	8	0796	5 1	4939							
	183	3	089			0975		103	2631						4933							
			S1			0770			2656	0	01547	7	0963		4870							
	183	3	089			0758	-	007	2658		- > 0.00				4867							
			S1			0608			2680		01325		1107		4823							
	183	2	S1 089			0493 0488		050	2695	0	01176	U	1232		4793							
	10.	,	51			0488			2696 2713	0	01009	1.	1341		4792 4789							
	183	3	089			0402		306	2725	Ü	01009	-4	1041		4791							
	10.		51			0400			2726	0	00891	2	1436		4791							
			S1			0374			2735		00810		1521		4798							
	183	3	085			0361		420	2739		00010	_	4-61		4809							
	183		0B5			0263		568	2760					-								

REFERENCE	SHIP	LATITUDE	1.0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	MARS		STATIO	IT NC				ORIGIN	ATOF	1*5		Crin	MAX.		WA	VE	V	VEA-	CLOUG	Τ		NODC]
CODE NO.	COOE	1/1		NGITUOE TOOM	10*		MO D			YEAR	CRUIS NO.		STATI			170	DF			ATION	1 6	HER	CODES		5	TATION	
311178	DT	30128N	-									1	_	DEN.	+-	3 1	'MPL'S	DH	KGI	PER	EA	-	TYPE A M	1		AUWREK	1
1 21/11/0	y KI j	30179M	1 13	1952 W	122	09	_	_	83 1	967	N1				-1	206	15	34	2	3		X 1	8 2	1		0008	1
								-	SPEED	BARO	<i>)</i> •	AIR TE	wr.	- VI). I _	NO.	SPEC										
					i	CODE	Im)	DIR.	FORCE	lmbs		BULB	BU			PTHS	BSERVA	TIONS									
								08	506	28	1 .	250	2:	39 8	Ti	14											
	MESSENGR TIME	CAST C	ARO								SPECIE	C VOLU	105	₹ 🛆 (, T	SOUND			Τ.		T						
	HR 1/18		YPE	DEPTH (m)	'	*C	2.	/a .	SIGM	A=1	ANOA	ALY-XI	0.7	X 10	W.	VELOCII		02 m1/1		O4-8 3 - 01/1	TOTA		NO2-N ug - al/l	NO3-N yg - ol/l	SI O4-SI	рΜ	c
1															-+		+		+		-	-			7,	_	-1
'	1	' ' .	STD	0000	2	392	354	0	239	9 1	00	3933	1	000	0	1532	7					- 1					
	18	3 0	B5	0000	2	392	353	97	239				-	000	_	1532											
			STO	0010		392	354		239	9	00:	3937	0	003	9	1532											
	18		BS	0010		392	353		239							1532	29										
			STD	0020		392	354		239		003	3940	2	007	9	1533	30										
	10.		STD	0030		391	353		239		003	3944	1	011	8	1533											
	183		BS STD	0030		391	353		239							1533											
	183		B5	0050 0051		037 025	350		247		003	1243	1	019	0	1524											
	10.	-	STD	0075		897	350 350		247 250		000	020	_	2011	_	1523											
	183		35	0076		891	350		250		002	930	>	056		1520											
			57D	0100		724	349		254		003	583	2	0336		1515											
	183	3 01	35	0102		712	349		254		002		,	000		1515											
		;	STD	0125	16	554	348	6	255		002	498	2	0400		1514											
			STD	0150	15	584	347	3	256	0	002	446	2	046		1512											
	183			0155			347																				
	183		GTD	0200		422	343		256		002	374	4	058		1507											
	103		STD	T0209 0250		390	343.		257				_			1506											
			510	0300		193 104	342		260 262			075 835		0693		1500											
	183			0306		985	340		262		001	033	8	079.		1494											
			STO	0400		798	340		265		0.0.1	581	4	0962		1493											
	183			T0403		792	340		265		001	201	*	0,02		1488											
			OTO	0500	06	20	340	4	267		001	334	7	1108		1482											
	183			T0598		+98	340	57	269	5						1479											
			TO	0600		97	3406	5	269	6	100	172	7	1233	3	1479	5										
	100		CTO	0700		447	3418		271		001	033	7	1343	3	1479	2										
	183		-	0789		12	342		272							1479											
			TD OT	0800		80	3429		272			9154		1441		1479											
	183			0900 T09 8 9		80	3438		273		000	8245	5	1528		1480											
	183			14900		363 265	3444	_	274							1480	9										
	100	00	, ,	14500	0 2	.05	3456	9	275	7																	

																					-		
NCE			-		-	MARS	DEN	STATION TH	ME	01	RIGINATO	OR*S	DEPTH	MAX. DEPTH		WAVE			COOES			ATION	
ID.	SHIP	LATITUE	DE	LONGITUDE		sou	ARE	(GMT)	YEAR	CRUISE		TION	10 80110M	OF		SERVA TION		D.C.				UMBER	
NO.	COOE	•	1/10	11/	10 2	10*	1	MO DAY HE	2,1/10	NO.	NUA	MBER		S'MPL'S	DIR	HGT PER	SEA	11	FPE AMI	1	_		
178	RT	3005	N	14007	W	123	00	10 23 2	29 1967	NIO	009		4437	16	33	[[4]	X	5	5 6			0009	
	1						WAT	TER W	IND BAR	0- AI	R TEMP.	°C VIS	NO.	SPE	CIAL								
							COLOR	TRANS. DIR.	OR IMP			WET CODE	OBS.	OBSERV	2 NOITA								
							CODE		FORCE				1 ,			-							
								14	512 21	0 22	28 4	228 7	14	1		1						_	
	MESSENG	R CAST	CAR			Γ.	°C.	s */	SIGMA-T	SPECIFIC		₹ ∆ O		ONU	02 ml/	PO4-P	TOTAL		02-N	NO3-N	SIO4-SI	pН	c
	TIME	of NO.	TYPE		-((m)	١,	C	,	31GMA=1	ANOMA	LY-X10/	x 10 ³	. VEL	OCHY		yg + 01/	ס - פע	171 pg	g - at/l	μg - σt/l	µg - at/1		-
	HR 1/10	-				_							-										-
			S1	rn n0	00	1 2	376	3528	2395	0039	9717	0000	1 15	322									
	22	0	089		00		376	35281	2395				15	322									
	~ ~	7	S1		10		364	3528	2398	003	9448	0040) 15	320									
	22	9	OBS		10		364	35277	2398				15	320									
		1	51		20		363	3528	2398	003	9465	0079		322									
			S1		30	2	2362	3528	2398	003	9481	0119		5323									
	22	9	089	5 00	135	2	2362	35277	2398					5324									
			S.	TO 00	50	2	2093	3503	2456	003	4084	0195		5255									
	22	9	OB:	5 00	54	2	2035	34977	2467					5239									
			S	TD O	75		1842	3488	2509	002	9017	027		5188									
	22	9	OB:	s 00	184]	1786	34858	2522					5173									
			S.	TD 0	.00		1740	3485	2532	002	6956	034		5162									
	22	9	QB:	S 0	109	1	1712	34839	2538					5155									
					25		1666	3475	2542		6051			5143 5118									
					150		1578	3460	2551	002	5278	047		5102									
	22	9	OB:	_	163		1524	34518	2557	002	2736	059		5039									
					200		1320	3424 34137	2578 2587	002	2130	000		5012									
	22	29	QB.		218 250		1142	3412	2603	00.2	0413	069		4984									
					300		1006	3409	2625		8391	-		4943									
	2.0	20	0B		326		0942	34077	2635	-00-				4924									
	22	2.9		-	+00		0781	3401	2655	001	5637	096	6 1	4875									
	2.	3.0	OB		437		0712	33994		001			-	4854									
	2.0	29		-	500		0618	3402	2678	001	3439	111	2 1	4827									
			_		500		0501	3408	2697		1627		7 1	4797									
	2:	29	08		646		0460						1	4788									
	2.6	- /			700		0437	3417	2711	001	0293	134		4788									
					800		0400	3427	2723	000	9209	9 144		4791									
	2	29	ОВ		357		0382	34319	2729					4793									
					900		0370	3435	2732	000	8352			4796									
			_		000		0349	3442	2740	000	7669	9 161	_	4804									
	2.	29	OB	S Tl	066		0340						1	4812									
	2	29	08	S 1	5800	1	0242	34580	2762														

REFE	PENCE	SHIP				-	# MAR	SDEN	STATION				01	RIGIN	ATOR'S		DEPTH	MAX.		WAVE		WEA-	CLOUD			NODC	
CTRY	10. NO.	CODE	LATITU		LONGITE	JOE S	Z	JARE	IG M 1		YEA	1	RUISE		TATION		BOTTOM	OF	00.	ERVA TIC		THER	CODES			STATION	
_		-		1/10		1/10	10*			HR,1/10	1	-	NO.	N	UMBER		0011010	' S'MPL'	S DIR.	HGT PER	SE A		TYPE A M	t .		NUMBER	4
31	1178	RT	3003	38N	1400	9 W	123		10 24	182	196	57	N10	010			4359	16	33	3		X 5	8 8	1		0010	5
								WA	TER	MIND		ARO-	Al	IR TEA	AP. °C	- vis.	NO.	SPE	CIAL								
								COLOR	TRANS. DIR		100	ETER mbsl	BU		WET	COD	OBS.		ATIONS								
								-	13	FOR S S O		203	-		228	7	14										
									1 1	7 30	0 1	203	22	. 0		1	1.4					-			1		
		MESSENG	CAST NO.	CAR		EPTH (m	, 1	*C	s */	SI	GMA-1		PECIFIC		7 D	A D		UND	O 2 ml/l	PO4=		TOTAL-P	NO2-N	NO3-N	SI O 4=		50
		HR 1/10		1111	•								~110/11/4			(10 ³	VELO	OCITY		h8 + 0	†/	NG - 01/1	µg - o1/1	yg - 01/l	уg - a	1/1	C
												- [1									
				Si	10	0000	2	359	3527		398		0039	935	6 0	000	15	317									
		18	2	OBS		0000		359	3526	2	398						15	317									
				\$1		0010		359	3527		399		0039	936	6 0	039		319									
		18	2	OBS		0010		359	35269		399							319									
				\$1 \$1		0020 0030		359	3527 3527		398 398		0039			J 79		321									
		18	2	OB:		0035		360	35268		398		0039	741.	<i>3</i> U	118		323									
		10	2	S1		0050		2087	3500		455		0034	1140	6 0	192		253									
		18	2	083		0054		030	34956		467		005	4 7	0 0	1 7 C		238									
			_	S1		0075		871	3500		511		0028	386	4 0	271		198									
		18	2	OBS	5	0084	1	823	35019		525							185									
				Si	TD (0100]	.780	3495	2	530		0027	712	8 0	341	15	175									
		18	2	083		0108		757	34918		533						15	169									
				S		0125		.718	3485		537		0026			408		159									
				SI		0150		.633	3471		547		0025	668	4 0	473		136									
		18	2	085		0163		576	34623	_	553		000					120									
		18	2	S1 OB3		0200		.334	3426 34139		577 586		0022	286	3 0	594		043									
		10	۷	S1		0250		138	3412	_	604		0020	134	2 0	702		983									
				51		0300		000	3409		626		0018			799		941									
		18	2	OBS		0323		1943	34072		634		0010	, ,	1 0	())		924									
				\$1		0400		793	3401	_	653		0015	814	4 0	969		879									
		18	2	085		0430		1740	34001		660							864									
				51	ro o	0500	C	628	3401		676		0013	364	6 1	117		831									
				S1	rD (0600	(504	3406		695		0011			244		798									
		18	2	OBS	5 T(0639	(468	34086	, 2	701						14	790									
				SI	TO (0700	(440	3416	2	710		0010	040.	2 1	355	14	789									
				\$1		0800		401	3427		723		0009	9221	0 1	453	14	791									
		18	2	083		0852		385	34318	_	728							794									
				\$1		0900		1373	3436		733		0008			541		797									
		1.0	2	\$1		1000		354	3442		739		0007	172	/ 1	621		807									
		18 18		OBS		1065		347	34454		743						14	815									
		1.8	2	OBS		1614	G (248	34581	2	762																

_	ICE	SHIP	LATITUDE	LO	AGILIDE AGET	MA SO	RSDEN	STAT	ION TIM		AR	CRUISI	ORIGINA	TATIO	N	OEPTH	OFFIR		WAVE SERVATION	s	WEA-	CLOUG		5	NODC
	NO.	COOE	1/10		· 1/10 2 ×	10"	10	MOIO	DAY HR.	1/10		NO.		U W B B	R	BOTTO	S'MPL"	S DIR.	HGT PER	SEA	CODE	TYPE A MT		N	UMBER
1 2	178	RT	30055N	14	0123W	12.					967	NIC	01	1		402	3 16	30			x 1	8 5			0011
r r	110	17.1	3003211	1 - 1	012311	1 2 2	WA1			NO			AIR TEA			NO.	T		1	- 1	71 4	, 0.5			0011
							COLOR		OIR.	SPEED	METE	-	ORY	WET	VIS.	OBS.	DECERT	CIAL							
							COOE	(m)		FORCE	(mbs) 1	BULB	BULI		OEPTH:	3								
									18	S12	23	7 2	244	23	3 7	14	ĺ								
	- 1	MESSENCE				Τ.		1	<u> </u>				C VOLU		ΣΛο		CNUC		PO4-P	Τ.,	TAL-P	NO2-N	NO3-N	S1 O4-S1	
		MESSENGR TIME O	NO. T	ARD YPE	OEPTH (m)		T °C	S	1/	SIGMA	-T	ANOA	VWTA-XII	17	∑ △ 0 DYN, M, x 10 ³	VE	LOCITY	02 ml/	yg - 01/		g - ot/t	ug - at/1	µg - 01/1	μg - 01/1	pН
		HR 1/10				-		-						-	X 10	-			-	-					
						1					. 1					1			1	1					
				ST0	0000		2386	35		2399		00:	3931	3	0000		5325								
		198		BS	0000		2386		376	2399		00:	2026	2	0020		5325								
		198		STD BS	0010		2386 2386	35	38 376	2399		00.	3935	4	0039		5327 5327								
		178		STD	0020		2386	35		2399		00	3940	1	0079		5328								
				STD	0030		2385	35		239			3945		0118		5330								
		198		BS	0034		2385		369	239							5330								
				STD	0050		2184	35	17	244	1	00	3546	0	0193	1	5280								
		198	0	BS	0052		2162	35	146	2445	5					1	5275								
				STO	0075		1973	35	06	2490)	00	3090	8	0276		5227								
		198	0	BS	0081		1932		032	2498	3						5216								
				STO	0100		1829	34		2514		00	2864	6	0350		5188								
		198		BS	0105		1806		877	251							5182								
				STO	0125		1770	34		2520			2755		0421		5175								
				ST0	0150		1692	34		253		00.	2642	5	0488		5155								
		198		BS .	0157		1664		756	254		0.0	2205	_	0.1.		5147								
		100		STD	0200		1411	34		2560		00.	2395	8	0614		5070 5052								
		198		BS STD	T0211 0250		1354	34	234	257		00	2067	0	0726		4997								
				STO	0300		0997	34		262			1816		0823		4940								
		198		B S	0310		0968		084	263		00	1010	'	0025		4931								
		190		STO	0400		0807	34		265		0.0	1594	8	0993		4885								
		198		BS	T0409		0792		013	265		~ ~					4880								
		170		STD	0500		0629	341		267		00	1358	5	1141		4832								
				STD	0600		0500	34	07	269		00	1168	9	1267	1	4796								
		198		BS	0605		0495	34	071	269	7					1	4795								
				STO	0700		0446	34	18	271	1	00	1032	5	1378	1	4792								
				STD	0800		0405	34		272	4	00	0911	9	1475		4793								
		198	0	BS	0809		0402		294	272							4793								
				STO	0900		0381	34		273			0833		1562		4801								
				STD	1000		0359	34		274		00	0771	1	1642		4809								
		198		BS	T1006		0358		436	274		0.0	0722	_	1717		4809								
				STO	1100		0338	34		274			0732		1717		4817								
				STD	1200 1300		0318	34		274			D697 D663		1857		4826 4834								
				STD	1400		0299	34		275			0631		1922		4834								
				STD	1500		0265	34		275			0598		1983		4854								
		100		BS.			0256		573	276		00	0778	1	1200		4854 4859								
		198	0	05	T1553		0230	54	213	216	Ţ					1	4827								

- AFTERSURE				Tal	MARSDEN	TARION TO	45		OR	IGINA	TDR"S		DEPTH	MAX.	_	WAVE	WEA-	CLDUD			IODC	
CTRY ID.	DDE	LATITUD	E LO	NGITUDE ES	SOUARE	STATION TH		YEAR	CRUISE	51.	ATION		TD MOTTO8	DEPTH DF		ERVATIONS	THER	CODES		51	ATION	
CODE NO.			1/10	· '1/10 3 3	10" 1"	MD DAY HE			NO.		IMBER	\rightarrow		374112		HGT PER SE	<u> </u>	TYPE AMT	_			
31 1178	RT	30001	LN 14	0053W	123 00	10 26 1		967		012 TEM			4390	43	33	2 3	X1	8 1	l	- 1	0012	
					COLOR		SPEED OR	BARD	-		WET	VIS.	NO. 085.	SPE	CIAL							
					CODE	TRANS. DIR.	OR FORCE	(mbs			BULB		DEPTHS	OUJERY	~ 110113							
						13	502	24	7 25	6	233	7	20									
M	ESSENGR	7247	CARD						SPECIFIC 1	VOLUM	٤ ٤	△ N. M.	SD	UND	D2 ml/1	PO4-P	TOTAL-P	ND2-N	NO3-N	S1 D4-S1	рН	S
	TIME 07	ND.	TYPE	DEPTH (m)	T ℃	5 %.	SIGM	A-1	ANOMA	Y-X10	, U	103	. VEL	DCITY	W2 INV	yg = a1/1	μg = 01/l	µg − 61/1	μg - αl/l	μg - o1/l	, , , , , , , , , , , , , , , , , , ,	c
 	X 1/10																					
1	- 1	F	STO	0000	2345	3516	239		0039	752	2 0	000		313								
	185		085	0000	2345	35156	239		0020	700		040		313								
	3.0.0		STO	0010 0010	2345 2345	3516 35155	239		0039	1198	, 0	040		314								
	185		OBS STO	0010	2343	3517	230		0039	820	0	080		317								
			STO	0030	2350	3518	239		0039			119		319								
	185		OBS	0030	2350	35179	239	94						319								
			STO	0050	2179	3500	243		0036	526	5 0	196		277								
	185		OBS	0050	2179	35004	243		0036	1020		279		277								
	100		STD	0075 0075	1820 1820	3470 34695	250 250		0029	1038	3 0	419		179								
	185		STO	0100	1727	3469	25		0027	7776	5 0	351		156								
	185		OBS	0100	1727	34692	25							156								
			STD	0125	1631	3456	25	36	0026	054	+ 0	419		130								
			STO	0150	1515	3442	25		0025	24:	1 0	484		096								
	185		OBS	0152	1505	34405	25!							093								
			STO	0200	1216	3411 34094	251		002	F / T:) U	601		1994								
	185		085 ST0	0205 0250	1192 1090	3410	25°		0019	362	1 0	704		966								
			STD	0300	0978	3411	26		001			798		1934								
	185		OBS	0305	0967	34114	26	34					14	930								
			STO	0400	0757	3400	26		0015	536	2 0	963		865								
	185		OBS	T0405	0747	33996	26		001	2201		107		+862 +820								
			ST0	0500 0600	0601 0490	3401 3406	26		001			231		792								
	185		085	0607	0490	34061	26		001	104	_ 1	1		791								
	105		STO	0700	0440	3417	27		0010	32	8 1	34)	1 14	+789								
			STD	0800	0402	3427	27	23	000	923	2 1	439		791								
	185		OBS	0805	0400	34275	27				_			+792								
			STO	0900	0378	3436	27		0000			527		4799								
	3.0.0		STO	1000 T1000	0356 0356		27 27		000	169	8 1	607		4807 4807								
	185		085 STD	1100	0336		27		000	729	7 1	682		4816								
			STO	1200	0316		27		000			753	3 14	4825								
			STD	1300	0298	3452	27	53	000			82		4834								
			STD	1400	0281	3454	27		000			885		4844								
			STD	1500	0266	3456	27		000	599	9 1	946		4855								
	185	i	OBS	T1517 1750	0263 0232		27 27		000	550	6 2	2090		4856								
			ST0 ST0		0205		27		000			222		4914								
	239	,	OBS	T2245	0185		27							4947								
	,		STO		0171	3465	27		000	461	3 2	464		4985								
	239)	OBS	T2719	0162		27							5019								
			STD	3000	0155		27		000	444	5 2	69		5064								
	239		085 085	3233 T3770	0151 0148			78						5196								
	23	,	STD		0140			77	000	453	7 3	3140		5237								
	239)	OBS	T4237	0151	34677	27	77					1	5280								
	239)	085	42700	0151	34683	27	78														

		SHIP	LATITUI	DE L	ONGITUDE 1/10	MARSOEN SOUARE	STATION THE	YEAR	ORIGIN CRUISE S	ATOR'S	OEPTH TO BOTTOM	MAX OEPTE OF S'MPL	1 08	WAVE SERVATIONS	WEA- THER GODE	CLOUD COOES		2.	NODC FATION UMBER	
-		0.7	3060														-			
3 1 1	178	KI į	2959	4N I	40147W			80 1967	N10 01		4389	15	32	2 3	X1	8 6	l	-	0013	
						WAT		SPEED MARY			280 12	SPI	CIAL							
						COLOR	TRANS. OIR.	OR IMBS		WET CO	SHTESO	OBSER	ZNOITAV							
							10	507 25		233 7	14									
	_		1				110	307 25	1 230	633 1	14	L		1						
	- 1	MESSENGR TIME		CARO	QEPTH (m)	т *с	5 %.	SIGMA-T	SPECIFIC VOLU		AA JO.	UNO	O2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	S1 O 4 S1	pН	5
		HR 1/10	Ť NO.	TYPE			1		ANOMALY-X1	X 10	3 VELO	OCITY		µg = a1/1	µg - a1/1	μg - at/1	νg - α1/1	μg = α1/l	P	C
																				П
	- 1		1	STD	0000	2348	3519	2396	003961	9 000	0 15	314		1	'	'		1	1	1
		180		085	0000	2348	35186	2396		,		314								
				STO	0010	2347	3519	2396	003963	7 004		315								
		180)	OBS	0010	2347	35185	2396				315								
				STO		2350	3519	2396	003969	9 007		318								
				STO		2353	3520	2395	003975			320								
		180		OBS	0031	2353	35202	2395				320								
				STD		2040	3488	2458	003381	0 019		239								
		180)	OBS	0051	2026	34872	2461			15	235								
				STO	0075	1790	3473	2511	002887	8 027	1 15	171								
		180)	OBS	0076	1784	34729	2512			15	169								
				STO	0100	1732	3480	2530	002710	6 034	1 15	159								
		180)	OBS	0102	1727	34806	2532			15	158								
				STD	0125	1657	3471	2541	002614	1 040	7 15	139								
				STD	0150	1553	3458	2555	002488	4 047	1 15	110								
		180)	OBS	0154	1534	34550	2557			15	104								
				STO	0200	1246	3417	2588	002183	4 058	8 15	013								
		180)	OBS	T0208	1206	34120	2591				000								
				STO		1086	3412	2614	001942			964								
				STD		0962	3410	2633	001759	2 078		927								
		180)	OBS	0308	0944	34094	2636				922								
				SID		0781	3401	2655	001563	7 095		875								
		180)	OBS	T0410	0765	34008	2657				870								
				STD		0614	3401	2677	001346			825								
		3.0		STD		0493	3406	2696	001167	9 122		793								
		180)	OBS	T0612	0482	34067	2698	001000	0 120		791								
				STD		0440	3417	2711	001032			789								
		10		STO		0402	3428	2723	000915	8 142		792								
		180)	OBS	0817	0397	34291	2725	000010			792								
				STD		0381	3436	2732	000840			+800								
		1.04		STO		0363	3442	2738	000783	1 159		810								
		180	,	OBS	T1030	0357	34439	2741	000734	2 16-		813								
				STD		0344	3448	2745	000724			820								
				STD		0325	3452	2750	000679		_	829								
				STD		0306 0287	3455 3457	2754	000642	-		838								
				STD				2758	000611			847								
		104	3	STD		0268	3457	2759	000594	9 193		856								
		180	,	085	T1519	0264	34573	2760			1.4	+857								

REFERENCE	SHIP		1.0	NGITUOE E	MARSO	EN	STATION T	IME		ORIG	NATO	R*S		Utrin	MAX, OEPTH		WAVE	WEA				NODE	
CODE NO.	CODE	LATITUOE		NGITUOE S	10°		MO I DAY I		YEAR	CRUISE NO.	STAT			10	OF MPL*S		HGT PER S	CODE	TYPE AM			UMBER	
311178	RT	30000N	-	0000W	123			040	1967	7 N10 0	14		1	4206	17	33	3 3				_		
1 - 2 - 2	1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		000011	1 1 2 2	WAT		WIND		A ID T	EMP.	℃	-1		1 /	1	12121	X2	6 8	I	1	0014	
						OLOR	TRANS. OIR	SPEED		ER ORY	W	/ET C	VIS.	NO. 085.	SPEC SERV	ATIONS							
					_	SODE	(//)	FORCE	$\overline{}$		81	J.f.8	_	OEPTHS									
							10	516	23	30 239	2	11	7	14									
	MESSENGR TIME 0	LCAST	CARO	DEPTH (m)	т	8,0	5 %.	510	MA-T	SPECIFIC VO	UME	₹ ∆ OYN.	0	SOUN	0	O2 ml/1	PO4=P	TOTAL-P	NO2-N	NO ₃ -N	\$104-51		5
	HR 1/10	NO.	TYPE	Derrit (m)	1			3101		ANOMALY-	X10 ⁷	х 1		VELOC	ITY	Q 2 19117 1	yg = 01/1	μg = α1/1	ug - ot/i	pg = al/1	11 to - gu	pH	c
																							\dagger
			STD	0000		56	3526		199	00393	09	000	00	153			1		'				
	040		085	0000		56	35260		199					153									
	0 4 0) (BS	0009		58	35261		198					153									
			STD	0010		58	3526		98	00393		00		153									
			STD	0020		57	3527		199	00393		00		153									
	0.40		STO	0030		56	3528		00	00393	0.3	01	18	153									
	040		BS STD	0033		56	35280 3488	_	00	00260	0.0	0.1	o 1	153									
	040)BS	0051		37	34867		55	00340	90	01	91	152									
	040	,	STD	0075		18	3467		99	00299	72	02	7 2	151									
	040		BS	0079		94	34658		04	00299	1 2	02	12	151									
			STD	0100		39	3467		18	00282	48	034	44	151									
	040	0	BS	0103		28	34666		21			-		151									
			STD	0125	15	95	3447	25	37	00265	19	04	13	151									
			STD	0150	14	55	3429	25	54	00249	38	04	77	150	75								
	0 4 0) C	185	0154	14	33	34267	25	57					150	69								
			STD	0200		03	3404		86	00219	89	05	94	149	96								
	040) C	85	T0205		83	34023	25	88					149	90								
			STD	0250		85	3406		09	00198		069		149									
	0.40		STD	0300		80	3411		31	00178	2 8	079	93	149									
	0 40		35	0308		64	34115		34	00155		- 0		149									
	040		STD	0400		83	3402		55	00155	93	096	60	148									
	040		BS STD	.T0407 0500	07	16	34011 3403		56 79	00133	1.6	1.3.4	0.6	148									
			STD	0600		95	3406		96	00133		110		148									
	0 40	0	85	T0610	04		34059		97	00117	رے	12.		147									
		Ŭ	STD	0700		36	3418		12	00102	0.7	134	a n	147									
			STD	0800		93	3429		25	00089		14		147									
	040	0	BS	0810	03	89	34295	27	26					147									
			STD	0900	03	71	3436	27	33	00082	89	152	22	147									
			STD	1000	03	52	3443	27	40	00076	30	160	01	1480	06								
	047	0	BS	T1093	03		34477	27	46					148	15								
			STD	1100	03		3448		46	00071		16		148									
			STD	1200	03		3452	27		00066		174		148									
			STD	1300	02		3456		56	00062		180		148									
			STD	1400	02		3458		59	00059		18		1484									
	047	0	ST0 85	1500 T1665	02	39	3459 34591	27		00057	5/	192	29	1489									
	047		03	11000	02	79	34391	27	03					148	(1								

Note	IO.	SHIP	LATITUOE	LO	NGITUOE NGITUOE	MARSDEN SQUARE	(GMT)	YEAR		TATION	DEPTH DEPT TO OF	H OB!	WAVE SERVATIONS	CODE	CODES		5	NODC TATION TUMBER	
WASSING CAST CAST CORD Inval DR Will Mark Bull		0.7																0015	
STO COOR THANK DIR OR STO COOR	11/8	KI	30124	M Ir	10230W							1 1 3	4 3	X I	8 6			0015	
STD OOO Care OOO Care OOO Care OOO Care OOO						-		SPEED MES	RO-	VI5.	200								
								OR .				VA IIONS							
MESSINGS CAST CAND TYPE OFFIN MI T S S SIGMA=T SHEGIFC VOLUME S SOUND OYEIN MADWARF-1897 VELOCITY MADWARF-1897 MADWARF-1897 VELOCITY MADWARF-1897 VELOCITY MADWARF-1897 MADWA							14		96 239	206 7	14								
STD 0000 2352 3527 2400 0039161 0000 15316 15316 15316 15316 15316 15316 15316 15316 15316 15316 15316 15316 15316 15318 1	1				T						T	1					1	1	٦.
STD 0000 2352 35265 2400 15316 15318 1		TIME (L CAST		OEPTH (m)	T ℃	5 -4.	SIG MA-T		OYN. M.		O2 m1/1			NO3-N	NO3-N vg - ol/l		pH	C
036		HR 1/10							-	X 10 ³			70	-		pg - 007 1	,	-	-
036						1											1		- }
STD O010 2353 3527 2400 O039220 O039 15318 O36 OBS O010 2353 35266 2400 O039241 O078 15318 STD O020 2353 3527 2400 O039241 O078 15319 STD O030 2352 3527 2401 O039258 O118 15321 STD O050 2191 3504 2429 O036585 O194 15281 O36 OBS O052 2170 35013 2433 15275 STD O075 1871 3443 2498 O030075 O277 15196 O36 OBS O080 1823 34796 2508 15182 STD O100 1696 3464 2527 O027449 O349 15146 O36 OBS O103 1678 34618 2529 15141 STD O125 1556 3443 2543 O025968 O416 15105 STD O155 1430 3426 2557 O024646 O479 15067 O36 OBS T0207 1189 34020 2587 O024646 O479 15067 O36 OBS T0207 1189 34020 2587 O1772 51996 O36 OBS O309 O952 3406 2632 O017725 O794 14923 O36 OBS T0415 O744 34003 2659 14863 STD O500 O485 3407 2680 O01508 128 14790 O36 OBS T0621 O466 34080 2701 O100246 1336 14787 STD O800 O400 3427 2723 O009209 1434 14791 O36 OBS T0621 O466 34080 2701 O100246 1336 14787 STD O800 O400 3427 2723 O009209 1434 14791 O36 OBS T1011 O359 34454 2742 O07586 1601 14810 O36 OBS T1011 O359 34454 2745 O007263 1675 14819									003916	1 0000									
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STD 0020 2353 3527 2400 0039241 0078 15319 STD 0030 2352 3526 2401		000							0039220	0 0039									
STD O030 2352 3527 2401 O039258 O118 15321		0.36							002026	1 0070									
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STD 0050 2191 3504 2429 0036585 0194 15281 15275		034							0039231	8 0118									
036		0.30)						003650	5 010%									
STD		036							003036.	0194									
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036		0 0 0							002744	9 0349									
STO 0125 1556 3443 2543 0025968 0416 15105 STD 0150 1430 3426 2557 0024646 0479 15067 036 085 0155 1406 34233 2560 15060 STD 0200 1215 3404 2584 0022210 0596 15000 036 085 T0207 1189 34020 2587 14992 STD 0250 1072 3405 2611 0019699 0701 14959 STD 0300 0952 3406 2632 0017725 0794 14923 036 085 0309 0932 34062 2635 14917 STD 0400 0769 3401 2656 0015462 0960 14870 036 085 T0415 0744 34003 2659 14863 STD 0500 0604 3402 2680 0013255 1104 14822 STD 0500 0485 3407 2698 0011508 1428 14790 036 085 T0621 0466 34080 2701 14786 STD 0700 0433 3417 2711 0010246 1336 14787 STD 0800 0400 3427 2723 0009209 1434 14791 036 085 T0621 0364 34294 2725 14792 STD 0900 0379 3437 2733 0008308 1521 14800 STD 1000 0361 3445 2741 0007586 1601 14810 036 085 T1011 0359 34454 2742 14811 STD 1100 0342 3447 2745 0007263 1675 14819		036	5																
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		036	,						000726	3 1675									
				STD	1200			2748	000694		14828								
STD 1300 0304 3452 2752 0006625 1814 14837																			
STD 1400 0285 3454 2755 0006303 1878 14846						-													
STD 1500 0265 3456 2759 0005958 1940 14854																			
036 OBS T1549 0255 34575 2761 14858		034	4						000077	0 1740									

REFERENCE				ag la la	MARS			ION TI	ME			DRIGIN	ATOR'S		DEPTH	MAX.		WAVE	WE		OUD		4	DDC	
CTRY ID.	CODE	LATITUDE		GITUDE SOUTH	SDO			GMI		YEAR			TATION		SDTTOM	OF.	1	ERVATION	0.0	26	ODES			ATION	
CODE ND.		1/	10	1/10	10"	1.	MD D	AY H	R.1/10		I N	10.	UMBER		20110111	S'MPL"	DIR.	HGT PER	SEA	EAbl	AMI				
311178	RT	30050N	1 14	0030W	123	00	10 3	30	182	1967	7 N	10 01	6		4389	15	14	3 3	X	2 8	7			0016	
					ĺ	WAT	ER	٧	MIND	SAR	0-	AIR TE	ΛP. ℃	VIS.	NO.	5.05	CIAL								
							TRANS.	DIR,	SPEED	MET	ER	DRY	WET	CODI	OBS.		ATIONS								
						CODE	(m)		FORCE	(mb	12	8778	BULB	-	0277113										
								15	519	19	92	239	233	3 7	14										
	MESSENGR	0.157	CARD		T							CIFIC VOLU	3	ΔD YN. M	SOI	JND		PD4=P	TOTAL	. NO	2-N	ND3-N	SI D4-Si		5
	HME 0	NO.	TYPE	DEPTH (m)	1	°C	5	٠/	SIGI	MA-T		IDMALY-XI	0.7 D	YN. M X 10 ³	. VELO	CITY	O 2 ml/1	ug - a1/			at/l	ug = a1/1	µg = o1/l	pН	c
	HR 1/10			-	-				-						-				+	-					
		-		2000	,	210	26	3.0	3.6	Λ.Ε		A 2072	2 (. 16	212		1		1	- 1		-		11
	100		STD	0000		340	35	28 278	24		U	03873	3 (000		313									
	182		DBS	0000		346		281	24							316									
	182)85 STD	0010		346	35.			03	0	03891	7 0	0 3 9		316									
			STD	0020		347	35		24			03897		0078		318									
			STD	0030		347	35.		24			03902		117		320									
	182	. (DBS	0031		347		281	24							320									
	182		DBS	0049		067		907		53						246									
	102	`	STD	0050		054	34		_	56	0	03402	2 (190		243									
			STD	0075		816	34		25			02970		1269		178									
	182	. ()BS	0076		810		692		03	_					177									
	182		380	0098		747		683		18						162									
			STO	0100		741	341			19	0	02818	5 (342		160									
			STD	0125	1	648	34	56	25	32	0	02703	1 (0411	. 15	135									
	182	? (08S	0147	1	543	34	436	25	46					15	105									
			STD	0150		521	34			49	0	02544	1 ()476		098									
	182	2 (385	T0194		249		880		81						012									
			STD	0200		232	34			84		02215		1595		007									
			STO	0250		099	34			10	0	01973	3 (0700		969									
	182	? (OBS	0293		1993		125		30						938									
			STD	0300		1977	34			32	0	01776	4 (794		933									
	182	2	OBS	T0392		781		020		55	^	01530	0 (000		873									
			STD	0400		764	34			58		01530		959		868									
	100		STD	0500		588	34			83	U	01292	9 .	1100		815									
	182	. (38S	T0569		501 484	34	046		94	0	01142	2 .	1222		791									
			STD	0600 0700		437	34	-		12		01142		1330		788									
	182	3	085	0780		1407		261		21	0	101021	7 .			790									
	102	'	STD	0800		1403	34			23	0	00916		1427		792									
			STD	0900		381	34			33		00825		1514		801									
	182	,	oBs	T0970		366		436		39	Ŭ	0000		1		807									
	102		STD	1000		360	34			41	0	00761	9	1594		809									
			STD	1100		1339	34			45		00726		1068		818									
			STD	1200		320	34			48		00693		1739		827									
			STD	1300		301	34			52		00659		1807		835									
			STD	1400		282	34			56		00623		1871		844									
			STD	1500		265	34			60		00591		1932		854									
	182	2	oBs	T1504		264		571		60						855									

REFERE		— Т	- E	MARSDEN	AIT MOITATE	A.E.	ORIGINATO	R*S	DEPTH MA		WAVE	WEA-	Crono		,	NODC
CTRY	ID. CODE LATIT	1/10 LO	1/10 E	SOUARE	(GMT)	YE AR	CRUISE STAT	ON BER	BOTTOM OF	0835	RVATIONS HGT PER SEA	CODE	TYPE AMT		N.	TATION UMBER
31 1	178 RT 300	6 N 14	001 M	123 00 WAT		83 1967	N10 017		4663 0	'	3 2	X1	6 5	1	}	0017
				COLOR	TRANS. DIR.	SPEED METE OR (mbs	R DRY W	ET CODE	0 = 0	PECIAL						
					15	S15 17	9 239 2	22 7	11							
	MESSENGR CAST TIME OF NO.	CARD TYPE	DEPTH (m)	7 °C	5 */	SIGMA-T	SPECIFIC VOLUME ANOMALY-1107	₹ △ D DYN. M x 10 ³	VELOCITY	O ₂ ml/l	PO4-P pg - o1/1	TOTAL-P	NO2-N µg - at/l	NO3-N µg - at/l	\$1 O4 - \$1 µg - 01/1	pH C
	118 77.0	6.7.0	0000	2220	25.22	24.02	0030034	0000	16222							
	183	OBS	0000	2338	3523 35230	2402	0039024	0000	15312							
	183	OBS STD	0009 0010	2339 2339	35235 3524	2402 2402	0039054	0039	15314 15314							
		STD	0020	2340 2340	3523 3523	2402	0039121	0078								
	183	08S STD	0032	2340 2331	35231 3523	2401	0039022	0195	15318							
	183	OBS	0051	2324	35220	2405			15317							
	183	STD OBS	0075 00 7 8	1915 1881	3477 34 7 40	2483 2489	0031577	0484	15207 15198							
	183	STD OBS	0100	1765 1754	3469 34679	2514 2516	0028667	0359	15167 15164							
	103	STD	0125	1623	3452	2534	0026769	0428	15127							
	183	STD OBS	0150 0152	1487 1476	3435 34339	2552 2553	0025164	0493	15086 15083							
	183	STD OBS	0200 T0204	1229 1212	3406 34047	2582 2585	0022323	0612	15006 15000							
		STD	0250	1086	3407 3410	2610	0019772	0717								
	183	STD OBS	0305	0962	34105	2632 2634	0011741	0011	14928							
	187	085 STD	T0364 0400	0863 0802	34049 3404	2645 2654	0015726	0978	14900							
	192	STD OBS	0500 T0552	0632 0542	3401 34000	2675 2686	0013669	1125	14833 14805							
	172	003	10002	0,742	34000	2000			14000							
REFERE		Т	i- i-	MARSDEN	IT_NOITAT2		ORIGINATO)R*S	DEPTH DEP		WAVE	W EA-	CLOUD		T	NODC
CODE	ID. CODE LATI	1/10 LO	" 1/10	SOUARE	MO DAY H	YEAR 8.1/10	CRUISE STAT	ION ABER	BOTTOM S'MI	F	HGT PER SE	THER CODE	TYPE AM		2	TATION
31	1178 RT 300	2 N 14	+000 W	123 00		95 1967		90		7 18	3 3	X1	8 2		1	0018
				COLOR		SPEED MET	ER DRY V	VIS.	NO. 085E	PECIAL RVATIONS						
				COBE	17	S14 18		31 7	14							
	MESSENGR CAST	CARD	DEPTH (m)	т 1с	5 %.	SIG MA-T	SPECIFIC VOLUME	₹ △ D	SOUND	O2 ml/l	PO4=P	TOTAL-P	NO ₂ -N	NO3-N	\$104-5	pH S
	HR 1/10	1,75		-				x 10 ³	VELOCITY		yg + 01/l	μg = 01/1	µg + at/l	μg - α1/l	yg = a1/	
	195	STD 085	0000	2338 2338	3524 35241	2403 2403	0038945	0000			1 1			1	,	
		SID	0010	2338	3524	2403	0038969	0039								
	195	OBS STD	0010	2338 2337	35243 3524	2403 2403	0038988	0078	15314 15315							
	195	STD	0030 0035	2336 2335	3524 35239	2403 2403	0039001	0117	7 15316 15317							
	195	STD	0050	2214	3511 35056	2428	0036694	0193	15287							
		STD	0075	2167 1899	3477	2437 2487	0031187	0277								
	195	OBS STD	0085 0100	1815 1780	34700 3471	2511	0028907	0353	15180 3 15172							
	195	OBS STD	0110 0125	1748 1668	34709 3458	2519 2529	0027332	0423	15164							
	195	STD	0150	1532	3440	2546	0025747	0489								
					3/.200	255/		0409								
		OBS STD	0165 0200	1448 1228	34300 3410	2556 2586	0022011	0609	15076 15006							
	195	OBS STD OBS STD	0165 0200 0220 0250	1448 1228 1128 1072	3410 34019 3405	2586 2598 2611	0019699		15076 15006 14973 14959							
		0BS STD 0BS STD STD	0165 0200 0220 0250 0300	1448 1228 1128 1072 0977	3410 34019 3405 3408	2586 2598 2611 2629		0609	15076 15006 14973 14959							
	195 195	OBS STD OBS STD STD OBS STD	0165 0200 0220 0250 0300 0330 0400	1448 1228 1128 1072 0977 0919 0772	3410 34019 3405 3408 34083 3402	2586 2598 2611 2629 2639 2657	0019699	0609	15076 15006 14973 14959 14933 14916							
	195	OBS STD OBS STD STD OBS STD OBS STD	0165 0200 0220 0250 0300 0330 0400 0440 0500	1448 1228 1128 1072 0977 0919 0772 0700 0619	3410 34019 3405 3408 34083 3402 33996 3401	2586 2598 2611 2629 2639 2657 2665 2677	0019699 0017985 0015432 0013526	0609 0713 0807 0974	15076 15006 14973 14959 14916 14871 14849 14827							
	195 195	OBS STD OBS STD STO OBS STO	0165 0200 0220 0250 0300 0330 0400 0440 0500 0600	1448 1228 1128 1072 0977 0919 0772 0700	3410 34019 3405 3408 34083 3402 33996 3401 3406	2586 2598 2611 2629 2639 2657 2665 2677 2694	0019699 0017985 0015432	0609 0713 0807	15076 15006 14973 14959 7 14933 14916 4 14871 14849 14827 14800							
	195 195 195	OBS STD OBS STD STD OBS STD OBS STD OBS STD	0165 0200 0220 0250 0300 0330 0400 0440 0500 0600 T0666 0700	1448 1228 1128 1072 0977 0919 0772 0700 0619 0509 0455 0440	3410 34019 3405 3408 34083 3402 33996 3401 3406 34107 3415	2586 2598 2611 2629 2639 2657 2665 2677 2694 2704 2709	0019699 0017985 0015432 0013526 0011873	0609 0713 0807 0974 1119 1246	15076 15006 14973 14959 7 14933 14916 4 14871 14889 7 14800 14789 8 14789							
	195 195 195	OBS STD OBS STD OBS STD OBS STD OBS STD OBS	0165 0200 0220 0250 0300 0330 0400 0440 0500 0600 T0666 0700 0880	1448 1228 1128 1072 0977 0919 0772 0700 0619 0509 0455 0440 04401 0376	3410 34019 3408 3408 3408 3402 33996 3401 3406 34107 3415 3427 34352	2586 2598 2611 2629 2639 2657 2665 2677 2694 2704 2709 2723 2732	0019699 0017985 0015432 0013526 0011873 0010477 0009220	0609 0713 0807 0974 1119 1246 1358 1456	15076 14973 14973 14916 14871 14881 14871 14889 14873 14789 14789 14789							
	195 195 195	OBS STD OBS STD OBS STD OBS STD OBS STD OBS	0165 0200 0220 0250 0300 0330 0400 0440 0500 0600 T0666 0700 0800	1448 1228 1128 1072 0977 0919 0772 0700 0619 0509 0455 0440 0401	3410 34019 3405 3408 34083 3402 33996 3401 3406 34107 3415 3427	2586 2598 2611 2629 2639 2657 2665 2677 2694 2704 2709 2723	0019699 0017985 0015432 0013526 0011873 0010477 0009220 0008227	0609 0713 0807 0974 1119 1246	15076 14973 14959 7 14933 14916 4 14871 14849 14849 14849 14789 14789 14791 14797							
	195 195 195	OBS SID OBS SID OBS SID OBS SID OBS SID OBS SID OBS	0165 0200 0220 0250 0300 0440 0500 0600 T0666 0700 0880 0900 1000 T1089	1448 1228 1072 0977 0719 0772 0700 0619 05509 0455 04401 0376 0372 0351	3410 34019 3405 3408 3408 3402 33996 3401 3406 34107 3427 34352 3437 34444 34491	2586 2598 2611 2629 2639 2657 2665 2677 2694 2704 2709 2723 2732 2734 2741 2747	0019699 0017985 0015432 0013526 0011873 0010477 0009220 0008227 0007544	0609 0713 0807 0974 1119 1246 1358 1456	15076 14973 14959 14959 14933 14959 14971 14842 14827 14880 14789 14795 14795 14797 214806 14791							
	195 195 195 195	OBS	0165 0200 0220 0250 0300 0440 0500 0600 T0666 0700 0800 0900 1000 T1089 1100	1448 1228 1128 1072 0977 0919 0772 0700 0619 0509 0455 0440 0401 0376 0351 0334 0332 0313	3401 34019 3408 3408 3408 33996 3401 3406 34107 3415 3427 34352 3437 3444 3449 3451	2586 2598 2611 2629 2639 2657 2665 2677 2694 2709 2723 2732 2732 2734 2741 2747 2750	0019699 0017985 0015432 0013526 0011873 0010477 0009220 0008227 0007544 0007014	0609 0713 0807 0974 1119 1246 1358 1456 1543 1622 1695 1764	15076 15006 14973 14959 14916 14871 14889 14880 14789 14789 14789 14789 14789 14789 14789 14789 14789 14789 14789 14789 14789							
	195 195 195 195	OBS	0165 0200 0220 0250 0300 0440 0500 0600 T0666 0700 0800 0900 1000 T1089 1100 1200 1300 1400	1448 1228 1128 1072 0977 0919 0772 0700 0619 0455 0440 0401 10376 0372 0351 0332 0332	3410 34019 3408 3408 3408 3401 3401 34107 3415 3427 34352 3437 3444 3449 3451 3452 3453	2586 2598 2611 2629 2637 2665 2677 2694 2709 2723 2734 2741 2747 2747 2750 2755	0019699 0017985 0015432 0013526 0011873 0010477 0009220 0008227 0007544 0007014 0006760 0006513 0006280	0609 0713 0807 0974 1119 1246 1358 1456 1543 1622 1695 1764 1830 1894	15076 15006 14973 14959 14933 14916 14849 14887 14886 14789 14789 14791 14792 14806 14815 14815 14815 14815 14815							101
	195 195 195 195	OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS	0165 0200 0220 0250 0300 0440 0500 0600 T0666 0700 0880 0900 1000 T1089 1100 1200 1300	1448 1228 1128 1072 0977 0719 0772 0700 0619 0550 04401 0376 0372 0351 0334 0332	34019 34019 34018 3408 3408 3402 33996 3401 3406 34107 3415 3427 34352 3437 3444 34491 34491 34491 3452	2586 2598 2611 2629 2639 2657 2665 2677 2694 2709 2723 2732 2734 2741 2747 2747 2753	0019699 0017985 0015432 0013526 0011873 0010477 0009220 0008227 0007544 0007014 0006760 0006513	0609 0713 0807 0974 1119 1246 1358 1456 1543 1622 1695 1764 1830	15076 15006 14973 14959 14933 14916 14849 14887 14886 14789 14789 14791 14792 14806 14815 14815 14815 14815 14815							131

					Τ.	ABLE	V1.—	Co	ntinı	aec	t								
REFERENCE SHIP	LATITUDI	T 10	E S	MARSDEN SOUARE	STATION TIL			DRIGINAT	OR'S	01	trin ne	AX.	WAVE	WE	. CLOUC			NODC	ì
CODE NO. CODE	* 1	1/10	NGITUDE NGN		MO DAY H	YEAR	CRUISE NO.	AT2 UN	MBER			PL'S OIR	HGT PER					NOITATE	
31 1178 RT	30080	N 13	19460W	122 09 WAT		85 196		019	~ T			15 2	5 3 4	X.	5 5 8			0019	
				COLOR	TRANS. OIR.	SPEED ME	TER T	DRY	WET CO	0 0		SPECIAL ERVATION	s						
					20			\rightarrow	228 6		4		-						
MESSENGE TIME 0	CAST NO.	CARO	OEPTH (m)	T °C	s °/	SIGMA-T	SPECIFIC	VOLUME	ĕ △ :	D	SOUNO	O ₂ m	PO4-	P FOTAL-	P NO ₂ -N	NO3-N	5104-5		5
HR 1/10		1476					ANOM	ALY-X197	x 10		VELOCITY		μg = 01.	/l µg = o1/	h8 = a1/	yg - at/1	νg - α1,	pH	c
100	1	STO	0000	2321	3520	2405	003	8741	000	0 !	1530	7	-			Į		1	11
185 185		0BS 0BS	0000	2321 2322	35204 35207	2405 2405					1530								
		STD STD	0010	2322 2323	3521	2405		8788	003		15309	7							
		STD	0030	2324	3521 3520	2404 2404		8865 8940	007		15313								
185		OBS	0032	2324 2110	35203 3499	2404 2448	003	4814	019	n	15313 15259								
185		OBS STD	0051 0075	2100	34988	2450					15256	,							
185		OBS	0079	1920 1898	3501 35015	2500 2506	002	9953	027	1	15212								
185		STD OBS	0100	1820 1812	3493 34920	2519 2520	002	8215	034	4	15186								
100		STD	0125	1739	3480	2529	002	7347	041	3	15184								
189		STU OBS	0150 0153	1630 1615	3463 34612	2541 2543	002	6199	048	0	15134								
		STD	0200	1301	3416	2576	002	2953	060	3	15031								
189		03S 5TD	T0207 0250	1265 1 16 5	34117 3413	2580 2600	002	0746	071.	2	15020								
189		5 T D 0B5	0300	1046 1032	3415 34149	2623		8647	081		14959)							
		STO	0400	0797	3401	2625 2652	001	5873	098	4	14955								
189		OBS STD	T0407 0500	0782 0628	34005 3403	2654	0.0.1	3535	113	1	14876								
189		STD OBS	0600 T0608	0508	3405	2693		1958	1258		14799								
107		STD	0700	0500 0453	34049 3417	2694 2709	001	0482	1370)	14797 14795								
189		STD OBS	0800 0804	0412 0411	3427 34276	2722	0000	9348	146	9	14796 14796								
		STD STD	0900	0389	3434	2729		3677	1559		14804								
189	(OBS	T1001	0366	3440 34399	2736 2736		8031	1641		14811 14811								
		STD	1100 1200	0345 0324	3443	2741 2 74 5	000	7638 7250	1721		14820 14828								
		STD	1300 1400	0304 0285	3449 3452	2749 2753	0006	5861	1866	5	14836								
		STD	1500	0266	3455	2758	0000	5102	1933 1996		14845 14854								
189	(OBS	T1542	0259	34558	2759					14859								
							,												
CIXT IV. COOR	LATITUOE	LON	GITUOE E	MARSOEN	STATION TIM	YEAR	CRUISE	RIGINATO	ION		0	TH OB	WAVE SERVATION	0000	CODES		. S.	NOOC	
	300701	10 139	1/10 E		1 03 0		7 N10	020	ABER	44	3 /// 1		3 5	SEA COOR	TITE AMI			UMBER	
, , , , , , , , , , , , , , , , , , , ,	, , , , ,	. ,	, , , , , , ,	WATE	R W1	NO BAF	IQ- AI	R TEMP.	VIS.	NO	o. ,	PECIAL		1 ^2	6 8		,	0020	
				COLOR	KANS. OIR.	OR (mb			VET COD	OEP	13. UBCE	RVATION S							
					22	515 16	55 22	28 2	22 7	1	1		L	1					77
MESSENGR TIME OF HR 1/10	CAST NO.	CARO	OEPTH Imi	T °C	s °4.	SIGMA-T	SPECIFIC	VOLUME LY-X107	₹ △ D QYN. W x 10 ³	۱.	SOUND	O2 ml/	PO4-P			NO3-N µg + al/I	SI 04-51	рH	S C
HR 1710										+									\dagger
082	(STD OBS	0000	2333 2333	3525 35252	2405 2405	0038	3726	0000		15311 15311								
082		OBS SI)	0008	2333 2333	35248 3525	2405	0036	2702	0030		15312 15312								
		STD	0020	2334	3525	2405 2405	0038		0039	3	15314								
082	(OBS STD	0028	2334 2334	35254 3525	2405 2405	0038	3847	0116		15316 15316								
082	(OBS STD	0045	2331 2278	35251 3516	2405 2414			0193		15318 15304								
082	(OBS	0069	2014	34838	2462	0038				15234								
095		STD OBS	0075 00 7 8	1902 1853	3474 34701	2484	0031	1478	0280		15203 15189								
095		STD	0100 0117	1751 1659	3467 34586	2516 2531	0028	8488	0355	5	15163								
095	,	STD	0125	1602	3450	2538	0026		0424	ŀ	15137 15120								
095	(STD OBS	0150 T0156	1442	3428 34232	2556 2560	0024	+745	0488		15071 15060								

0017949

0015268 0967 0013456 1111

T0156 0200 0244

STD OBS

STD STD OBS STD STD

34J6 34U65

3406 3400 33998

2610

RENCE	-	-									0.000				MAX.				Tarana				
ID.	SHIP	LATITU	IDE	LONGITUDE		SDEN	STATION	N TIME UTI	YEAR	CRUI	ORIGIN	TATION		DEPTH	DEPTH	085	WAVE ERVATIONS	WEA-	CODES		[S1	NODC	
NO.	CODE		1/10	1/10	10°	1 1 "	MO DA	Y HR. 1.	/10	NO		UMBER	8	MOTTON	OF S'MPL"	DIR	HGT PER SE	CODE	TYPE AM	7	N	UMBER	
1178	RT	3000	N	14000 W	123	00	11 04	14	6 196	7 N1	0 02	1	4	+297	15	30	3 4	X1	4 6			0021	
	1 1				1	WAT		WIN			AIR TEA			NO.			121.1	1 ~ 1	1 4.0	'	'	0021	
						COLOR	TRANS. P	OIR. 5	PEED ME		ORY	WET	VIS,	085.		CIAL							
						CODE	(m)		QRCE (m)	bs)	8ULB	BULB		DEPTHS	0 - 3 - 1 - 1								
							1	19 5	06 1	32	220	196	7	14									
	MESSENGR	CAST	CARE		Π.			. 1		SPECI	FIC VOLU	us ≥	ΔD	sou	IND		PO4-P	TOTAL-P	NO2-N	NO3-N	\$104-51		İs
	HR 1/10	Y NO.	TYPE		T	*C	5 */	• •	51G M.A -T		MALY-XI	DY	N. M.		CITY	02 ml/l	µg + a1/1	μg = at/1	ug = a1/1	yg = a1/1	μg - αI/I	pН	0
	HK 1/10	-	-					-		+				-			-						t
	1	1	ST	0 0000	1 2	331	3523	3	2404	1 00	3881	5 06	000	15	310		1		}				L
	146	6	OBS			331	3523		2404	00	, 5001	2 01	00		310								
	4 -11	_	ST			324	3524		2406	0.0	3861	7 00	39		310								
	146	5	OBS			324	3523		2406						310								
			ST			326	3524		2406	0.0	3870	4 00	77		312								
			ST			327	3524		2405		3879		116		314								
	146	6	OBS		2	327	3523	35	2405						314								
			ST		- 2	319	3523	3	2407	0.0	3871	1 0	194	15	315								
	146	6	035	0050	2	319	3522	27	2407					15	315								
			ST	0075]	1849	3469	9	2493	0.0	3054	9 0	280	15	188								
	146	6	OBS	0075	1	849	3469	92	2493					15	188								
			ST	0 0100	1	764	3473)	2515	0.0	2855	7 0.	354	15	167								
	146	5	OBS	0100	1	764	3470	2 0	2515					15	167								
			ST	U 0125	- 1	1667	345	7	2528	0.0	2738	3 0	424	15	141								
			ST			1551	3441		2544	0.0	2593	4 0	+91		107								
	146	5	OBS			541	344		2545						105								
			ST			256	3408		2579	0.0	12268	2 0	12		015								
	140	6	OBS			1231	3405		2582						007								
			ST			091	3408		2609		1983		718		966								
			ST			957	3409		2634	0.0	1755	5 0	12		926								
	140	6	OBS			945	3400		2636						922								
	2.1	,	ST			763	340		2657	0.0	1537	٥, ٥	777		868								
	140	b	OBS			754	3400		2658	0.0	1220	0 1	2 2 0		865								
			ST			0601	3401		2679		1329		120		820								
	1.4	,	ST			0485	3406		2697	00	1158	2 1.	244		790								
	14	0	OBS ST)476)434	3406		2698 2711	0.0	1025	Q 1	354		788 787								
			ST			397	342		2723		00917		451		789								
	146	6	085			394	342		2724	00	,0,1,	- I.	1		790								
	141		ST			374	343		2733	0.0	0825	0 1	538		798								
			ST			353	3441		2741		0756		517		806								
	140	6	OBS			351	3445		2742	00		L			807								
	7.40		ST			333	344		2745	0.0	0718	8 1	591		815								
			ST			314	3449		2749		0686		761		824								
			ST			296	345		2752		0656		828		833								
			ST			280	3454		2756		0627		892		844								
			ST			1264	3456		2759		0597		954		854								
	146	6	085			260	3450		2760						857								
	1,40		000	11267		200	545		2,00						00								

TABLE VII. Observed and interpolated oceanographic data for stations taken by USCGC KLAMATH at Ocean Station NOVEMBER, 26 November-17 December 1967, prepared from NODC Listing No. 31-1185 KL.

													_												_			
REFERENCE	SHIP	LATITU	0.	LONGI	THIDS	CTR	MARS SDU	DEN	STATIC	N TIA	A.E	YEAR	<u> </u>	ORIGIN			1	DEPTH	MAX. DEPTH	D.R.S	WA.	VE	WEA	CLDU			NODC	
CODE ND.	CODE	• LA 111 U	1/10	LONGI	1/10	INDC	10°		MO DA		1/10	TEAK			STATII NUMI		81	OT MOTTO	OF S'MPL'S			PER SE	THER			S	NOITAT REEMU	
311185	KL	3000		1400		-	123	1	11 2			1967		11 00			1	+390	19		2	2	^					
1 21/1103	1 45	2000		1700	, w		ارےد	WAI			ND	1707	I OI	AIR TE		- 1	1,4		19	04	4	-		6 8	1		0001	
							1	CDLOR			SPEED	BAR			WI	V	15.	NO.	SPEC	CIAL								
							- 1	CODE	TRANS, Imi	DIR.	FORCE	(mb		BULB	BU		OF	SHTAR	DBSERV	A TIDN S								
										03	512	28	3.8	189	1	72 7	,	14										
													П		1						_							
	MESSENGE	CAST OF NO.	CAR	D 1	DEPTH (m)	T	°C	5 °		SIGA	T-AN	SPE	CIFIC VOLU	JME 107	Σ Δ DγN.	Μ.	VELO		O2 ml/l		D4-P	TOTAL-P		NO3-N	5104-51	pН	C
	HR 1/10			-											-	x 10		7000	70117		- 10	- 01/1	pg = u171	μg - of/	νg - σΙ/Ι	µg + al/1		c
				_			0																					
	1.0		S1		0000			046	351		24		0	03206	6	000	0		235									
	18	9	0 B S		0000			046	351		24		_	0 2 2 0 0	_	000			2 3 5									
	18	α	089		001			047 047	351 351		24		0	03205) /	003	2		237									
	10	,		D D	002			047	351		24		۵	03205	Q	006	4		239									
			S1		0031			046	351		24			03206		009			240									
	18	9	OBS		0031			046	351		24			0000		507	3		242									
			51		0050			045	351		24		0	03212	8	016	0		243									
	18	9	089	5	006	3	2	044	351	26	24	76							245									
			51	TD	007	5	1	905	349	7	25	00	0	02988	14	023	8	15	207									
	18	9	OBS	5	009	6	1	729	347	64	25	28						15	157									
			51	TD	010	0	1	717	347	5	25	30	0	02712	6	030	9	15	154									
			51		012			628	346		25		0	02613	7	037	6		130									
	18	9	OBS		012			628	346		25								130									
		_	51		0150			497	344		25		0	02493	15	044	0		090									
	18	9	083		018			313	341		25		_	01000		0 5 5	0		034									
			S1 S1		0200			265 077	341		25 26			02226		055			019 961									
	18	9	089		1025			074	340		26		0	01945	, 1	000	1 6		960									
	10	_		TD '	0300			963	340		26		0	01790	3	075	5		927									
	18	9	083		0371			805	340		26		_						880									
				TD	0400			763	340		26		0	01537	5	092	2		868									
			\$1	TD	0500	0	0	605	339	9	26			01349		106			822									
	18	9	089	5 1	1050	8	0	594	339	86	26	78						14	818									
			51	T D	060	0	0	519	340	8	26	95	0	01184	8	119	3	148	B 0 4									
			51		070			453	341		27		0	01048	12	130	15	14	795									
	18	9	089		076			420	342		27							14	792									
				TD	080			409	342		27			00931		140			794									
				TD	0900			380	343		27			00846		149			B 0 0									
	18	_		T D	1000			355	344		27		0	00773	8	157	3		B07									
	10	9	OBS	70	102			350 333	344		27		0	00726		164	0		908 815									
			51		1200			313	344		27			00687		171			823									
	18	9	0B3		127			299	345		27		U	00007	0	TIL	7		B 30									
	10		S1		1300			294	345		27		0	00650	2	178	6		B 3 3									
				TO	1400			277	345		27			00614		184			B 4 2									
				TD	1500			261	345		27			00586		190			B 5 3									
			51	T D	1750			229	346		27			00539		205		141										
	18	9	0B	5 1	1191	9	0	212	346	04	27	67						140	903									

																_
FERENCE	SHIP	LATITUDE LO	INGITUDE HE	MARSDEN	STATION TIN	AE YEAR	ORIGINA		OEPTH DEP	H OS	WAVE SERVATIONS	WEA-	CLOUD			NODC TATION
E NO.	CODE	1/10	NGITUDE SEN		MO LOAY HE		CRUISE 5	TATION IUMBER	BOTTOM S'MP		HGT PER SE	CODE			N	UMBER
+	5 KL		4004 W			91 1967					1 1		6 7		-	0003
1 1 1 8	I VE I	2003 N 12	+004 W	WAT		IND	A 10 751		4024 1	8 03	3 3	1	101/			0002
						SPEED MET	0-	V15,		PECIAL						
				COLOR	TRANS. DIR.	FORCE (mb		BULB COD	DEPTHS OBSE	2 NOIT AVS						
					05	\$20 25	7 183	178 7	14							
				1							_				1	
	MESSENGE	CAST CARD	DEPTH (m)	1 °C	5 %.	SIGMA-T	SPECIFIC VOLUM	ME SAD	SOUND	0 2 ml/	PO4-P	TOTAL-P		NO3-N	\$104-\$1	pН
	HR 1/10	T NO. TYPE					ANOMACIENT	x 103	VELOCITY		yg - 01/l	yg - o!/l	pg - ot/l	pg - a1/1	μg - α1/I	
	1	STD	0000	2026	3510	2478	003172	0 0000	15229		,					
	19		0000	2026	35095	2478			15229							
		STO	0010	2027	3510	2478	003177	0 0032								
	19		0014	2028	35099	2478			15232							
		STO	0020	2028	3510	2478	003181									
		STO	0030	2027	3510	2478	003186	0 0099								
	19		0038	2027	35093	2478	00010-		15236							
		STO	0050	2026	3509	2478	003192	5 0159								
	19	1 0BS STD	0060 0075	2025 1850	35090	2478	007057	1 0/2/	15239							
	19		0075	1718	3483 34649	2504 2522	002957	1 0236	15190 15152							
	19	STD	0100	1710	3464	2526	002754	0 030								
	19		0119	1651	34629	2536	002754	0 030	15136							
	17	510	0125	1628	3459	2539	002637	0 0379								
		STO	0150	1528	3445	2551	002529									
	19		0179	1408	34297	2565			15065							
		STO	0200	1305	3419	2578	002281	1 0560	15033							
	19	1 085	T0237	1150	34054	2597			14984							
		510	0250	1117	3405	2603	002045	4 0668	14975							
		STD	0300	0995	3405	2624	001848	8 076	14939							
	19		0351	0883	34051	2642			14906							
		STD	0400	0785	3401	2654	001569	6 0936								
	19		T0469	0667	33978	2668			14841							
		STO	0500	0626	3400	2675	001369									
		STD	0600	0514	3409	2696	001171	2 1210								
	19		T0697	0436	34166	2711			14787							
		STO	0700	0435	3417	2711	001027									
		STD	0800	0406	3426	2721	000935									
		STD	0900	0380	3434	2730	000854	1 150								
	19	1 085 STD	0944 1000	0369 0357	34373 3440	2734 2737	000790	9 1590	14803 14808							
		STD	1100	0335	3445	2744	000735									
	19		T1176	0320	34486	2748	00013)	, 1000	14822							
	2.7	510	1200	0315	3449	2749	000690	1 173								
		STD	1300	0297	3451	2751	000664									
		STD	1400	0279	3452	2754	000638									
		STD	1500	0263	3454	2757	000614									
		STO	1750	0229	3457	2763	000558									
	19		T1805	0222	34582	2764	,,,,,,		14887							

																										_	
REFERENCE	SHIP			_		- ec	MARS	DEN	STATIO	N TIN				DRIGIN	ATOR'S		DEPTH	M AT		W	AVE	WEA-	CLOND			NODC	
CTRY ID.	CODE	LATITU	1	LONG	SITUDE	DRIF	sou			WT1		YEAR	CRUIS		TATID		10 80110	OF			VATIONS	THER	CDDES			NOITATE	
CODE NO.			1/10		1710	2	104	1.	MD DA	Y HR	1/10		NO.	- -	MUMBE	R	10110	M S'MPI	'S DIR.	HC	ST PER SEA		TYPE AM	T		- DIVIOLA	4
311185	5 KL	3005	1N	139	1590W		122	09	12 0	1 1	88]	967	N1	1 00	3		484	6 1	5 01	1 2	2		66			0003	,
							[WAI	ER	WI	ND	BARC)- L	AIR TE	MP, °C	VIS.	NO.	0.0	ECIAL								
								COLOR		OIR,	SPEED	METE	R	DRY	WET	COD	DBS.	O DCCD	VATION:	s							
								CODE	tm]	_	FORCE	lmbs	-	BULB	BULB	-	DE1111	1		4							
										00	500	24	0	194	18	3 7	14										
	MESSENGR	CAST	CAR	n				h					SPECIE	IC VOLU	AA F	₹ ∆ D	12	DUND	l		PO 4~P	TOTAL-P	NO2-N	NO3-N	SI D ₄ =5		S
	TIME	or NO.	TYP		DEPTH	(m)	1	°C	2 .		SIGM	A-T		MALY-X	9.7	X 10 ³	VE	LOCITY	O 2 m1	71	yg - 01/1	μg - ot/L	μg - α1/1	μg - α1/1	ug - 01/		C
	HR 1/10			-					+						+				-	-						+	-
			_ ر	- 1	000	^	١ ,	064	351	ا ا	247	7.	0.0	2100	_	0000	, 1	F 2 / 1		- 1				1	1	1	- 1
	100	^		TD	000			064	351				00	3198	2	0000		5241									
	188	8	OB:				_		351		247		0.0	2211	0	0000		5241									
	188	n	OB:	TD	001			065 065	351		247		00	3211	4	0032		5243 5243									
	181	0		S TD	001			066	351		24		00	3212	3	0064		5245									
				TD	003			067	352		24			3209		0096		5247									
	188	R	OB:		003			067	352		24			200	4	0 - 7 (5247									
	100	0		TD	005			067	352		24		0.0	3214	. 1	0161		5250									
	188	8	OB:		005			067	352		24			,	-	0 = 0 .		5250									
				TD	007			826	347		250		00	2965	3	0238		5182									
	188	8	OB:		007			820	347		250							5180									
				TD	010			789	348	9	252		0.0	2779	6	0310		5177									
	188	8	OB:	S	010	2	1	784	349	00	252	25						5176									
			5	TD	012	5	1	690	347	2	253	3 4	00	2681	0	0378	3 1	5150									
			S	TD	015	0	1	580	345	4	254	+6	0.0	2575	8	0444	. 1	5118									
	188	8	OB:	S	015	4	1	561	345	10	254	48					1	5112									
			S	T.D	020	0	1	324	341	9	25	74	00	2317	9	0566	, 1	5039									
	188	8	0B	S	T020	7	1	293	341	51	251	7 7					1	5030									
			S.	TD	025	0	1	149	341		260)4	00	2039	2	0675	5 1	4987									
			S	ID	030			005	341		262	2.7	00	1822	7	0771		4943									
	181	8	0B:		030			982	341	-	263							4936									
				1 D	040			795	340		26		00	1584	3	0942		4880									
	18	8	0B:		T041			776	339		26							4874									
				TD	050			624	340		26			1359		1089		4829									
	20			TD	060			501	340		269		00	1177	6	1216		4797									
	18	8	OB:	-	061			487	340		26			10/0				4794									
				10	070			443	341		271			1043		1327		4791									
	10	0		10	080			404	342		273		00	0940	13	1426		4792									
	18	8	0 B	TD .	081			398 383	342		272		0.0	A 0 E 7		151		4793									
					090						27:			0857		1516		4801									
	18	0	0B:	T D	100 T103			365 359	344		273		00	0785		1598		4811 4814									
	101	0		TD TD	110			346	344		274		0.0	0745	8	1675		4820									
				TD	120			327	344		27			0710		1747		4820									
				TD	130			307	345		27			0674		1817		4838									
				TD	140			286	345		27			0636		1882		4846									
				TD	150			265	345		275			0598		1944		4854									
	18	8	0B.		T152			260	345		276							4856									
	201	0	00	-	. 2 . 2				,,,	0 1	e 1 (-	. 0 . 0									

FERENCE	SHIP				-	MA	RSOEN	STAT	ION TIP				ORIGINA			DEPTH	MAX.		WAVE	NIE.	WEA-	CLOUT			NODC
DE NO.	CODE		ATITUOE 1/10	LONG	1/10	100					EAR C	RUISI NO.		UMBER	8	OT MOTTO	2.0	1 00.	HGT PER		THER	TYPE AM			TATION
-	5 VI	30		1 / 0	_	1	-	MO (07.7		-			< 1.0				SEA	-				
31 118	5 KL	29	9560N	140	030W	08					967	N1				618	16	34	3 2	ļ		6 8	1		0004
								TER	W	SPEED	8ARO-	_	AIR TEM		VIS.	NO. OBS.		CIAL							
							COLOR	TRANS.	OIR.	OR FORCE	(mbs)		DRY BULB	W ET BULB	CODE	DEPTHS	OBSERV	2 MOIT A							
								+	34	518	210	+	194	178	7	14									
					<u> </u>		1	1	177	010	210	:				1			-	-			_	Г	
	MESSEN TIMIT	E OF N	AST CAR		DEPTH Imi		1 °C	S	-/	SIGMA	\~T S	PECIFI	ALY-XIO	2" DY	Δ O.		OCITY	0 2 ml/l	PO ₄ -		OTA L-P	NO2-N	NO3-N	5104-51	pH
	HR 1/	/10	117											X	103	AFL	OCIIT		yg • □	1/1	µg = e1/l	μg = σt/l	pg - 01/1	µg - 01/1	
														1			1								
	'		Ś	TD '	0000		2037	35	12	247	7	003	31818	3 00	000	15	233								
	1	95	OB	S	0000		2037	35	120	247	7					15	233								
				TD	0010		2038	35		247	6	00	31946	5 00	32	15	234								
	1	95	08		0012		2038		108	247							235								
				TD	0020		2038	35		247			32012		64		236								
				T D	0030		2039	35		247		003	3205	1 00	96		238								
	1	95	OB.		0034		2039		109	247							239								
				TD	0050		2040	35		247		00:	32083	3 0.	160		242								
	1	95	OB		0055		2040		121	247							243								
	1	0.5		TO	0075		1843	34		250		00.	2947	1 0.	237		187								
	1	95	08.		0084		1779		740	251		00	.7/05				169								
	1	95	0B:	TD	0100		1720 1682	34	71 585	252 253		00,	27485	0.	308		154								
	1	90		TD	0125		1629	34				00'	26392	0.0	376										
				TD	0150		1529	34		253			25392		+40		129								
	1	95	08		0165		1462	-	350	255		002			,40		081								
	-	, ,		TD	0200		1259	34		258		on:	22372	2 0	60		017								
	1	95	08:		T0220		1167		347	259		002		_	00		987								
	•	,,		TD	0250		1109	34		260		oo.	19975	5 04	666		972								
				T D	0300		1005	34		262			18006		760		944								
	1	95	08:		0319		0963		142	263		00.		- 0	, 00		932								
	-	-		TD	0400		0766	34		265		00	15418	3 09	928		869								
	1	95	08		T0414		0737		000	266							860								
				TD	0500		0602	34	03	268		00	13159	5 10	070		821								
			S	TD	0600		0489	34	0.8	269	8	00	11482	2 1	194	14	792								
	1	95	08	S	T0617		0474	34	091	270	1					14	789								
			S	TD	0700		0444	34	15	270	9	00	10524	4 1.	304	14	791								
			S	TD	0800		0411	34	23	271	8	000	09633	3 14	+04	14	795								
	1	95	ОВ.	S	0819		0405	34	249	272	1					14	796								
			S	TD	0900		0381	34	33	272	9	000	0862	7 14	+96	14	800								
			S	TD	1000		0353	34	42	273	9	000	07715	5 15	77	14	806								
	1	95	08	S	T1020		0348	34	437	274	1						808								
				TD	1100		0328	34		274		000	0722		552		813								
			S	TD	1200		0307	34	48	274	9	000	0686		723		821								
				TO	1300		0287	34		275			06509	_	789		829								
				TD	1400		0271	34		275			06199		353		840								
				TD	1500		0257	34		275		000	0590	1 19	914		851								
		95	OB:		T1596		0247	3/	583	276	2					1/	863								

REFERENCE	SHIP	LATITUE	10	NGITUDE LE	MARS SQU.		STAT	ION TI		YEAR		RIGINA			OEPTH TO	MAX. DEPTH		WA.	VE ATIONS	WEA-	CLOUD		1	ODC
CTRY ID.	CODE		1/10	NGITUDE 1/10	10°		MOIT			IEAN	CRUISE NO.		ATION	1	MOTTOR	S'MPL"	1		PER SE	THER	TYPE AM	-		UMBER
311185	KL	3003.		+0032W	123					967	NII	005			4006		1		4		1			0005
1 2111102	1 75 1	3005	214 (1-	*****	الحا	WAT			VIND	_	1 4	IR TEM			NO.	16	34] 2]	4 }	1	916	1	1	00051
						COLOR	TRANS.	OIR.	SPEED	MET	0		WET	VIS.	085.		CIAL /ATIONS							
					- 1	COOE	(m)	UIK.	FORCE	Lmbi	s) 8U	LB	BULB		DEPTHS	000000								
								28	508	23	4 17	78	156	7	14									
	MESSENGR	CAST	CARO				Ι.				SPECIFIC	VOLUM	٤٤	Δο	1501	סאנ		P	04-F	TOTAL~P	NO2-N	NO3-N	S1 04-St	
	HR 1/10	NO.	TYPE	DEPTH (m)	1	*C	2	*/	SIGM.	A-T	ANOMA		7 121	N. M. 10 ³		CITY	02 ml/		- 01/1	μg - α1/1	pg - a1/1	μg - ot/l	μg - αl/l	pН
	1710			-	1								+		+									
	t	1 1	STD	0000	2	233	35	15	248	u '	0031	1470	1 00	000	15	232		1	- 1		l	l	1 1	
	190)	085	0000		033		154	248		000					232								
	190)	085	0009	2	036	35	162	248							234								
			STO	0010	2	036	35	16	248		0031	1524	00	31		235								
			STD	0020		036	35		248		0031	1579	00	063	15.	236								
			STD	0030		035	35		248		0031	1624	00	95		238								
	190)	OBS	0033		035		154	248							238								
			STD	0050		034	35		248		0031	1648	3 0	158		241								
	190)	085	0052		034		159	248		00.16		_	125		241								
	1.07	,	STD	0075		850	34		250		0029	1991	. 04	435		189								
	190	,	OBS STD	0076 0100		843 724	34	775	250 252		0027	7706	n'	307		187 155								
	190	1	085	0104		706		658	252		002	1190	, 0.	100		150								
	170	,	STD	0125		627	34		253		0026	493	٠.	375		129								
			STD	0150		522	34		255		0025			439		099								
	190)	085	0151		518	34	442	255					-		097								
			STD	0200	1.	272	34	15	258	3 1	0022	2472	0 :	558	15	021								
	190)	085	T0209		235	34	113	258	15					15	010								
			STO	0250		125	34		260		0020			65		978								
			STD	0300		002	34		262		0018	3162	0	761		942								
	190	,	085	0312		974		112	263		0015					934								
	190	1	STD 08S	0400 T0414		793 767	34	010	265 265		0015	740	0 9	930		879								
	190	,	STD	0500		529	340		267		0013	1505	. 17	77		871 832								
			STD	0600		508	34		269		0011			204		800								
	190)	085	10625		485		080	269		001.	. 501	1.4	- 0 4		794								
			STO	0700	0	450	34	15	270		0010	1595	1.3	316		793								
			STD	0800	0	410	34.	25	272	0	0009			+17		795								
	190)	085	0836	0	398	34.	280	272	4					14	796								
			STD	0900	0	382	34	34	273	0	0008	3565	15	07	14	801								
			STD	1000		358	34		273		0007	7773	1.5	89	14	808								
	190)	OBS	1049		347		449	274							812								
			STD	1100		336	34	_	274		0007			64		816								
			STD	1200		315	34		274		0006			735		824								
			STD	1300		297	34		275		0006		_	303		834								
			STD	1400		280	34!		275		0006			368		843								
	190)	ST0 08S	1500 T1500		264 25 <i>2</i>	34		275		0006	005	15	929		854								
	190	,	003	T1590	0	272	34	577	276) T					14	864								

ENCE				- S	MAR	SDEN	STAT	ION TIM				DRIGINA	TOR	*5	DEPTH	MAX		WAVE		WEA	CLOUD			NODC	
ID.	CODE	LATITUI	1/10 L	ONGITUDE	101	ARE 1"		GMT)		AR	CRUISE NO.		ATIC UM8		10 MO1108	DF 5'MPL	1	HGT PE		CODE	CODES TYPE AM	1	N	UMBER	
1185	KL	3005	_	40050W	123	00	-			67	N11	006		4	4244	39	36	1 4			6 3			0006	
						WA	ER	WI	ND SPEED	BAR)- 	AIR TEM		vis.	NO. DBS.	SPI	ECIAL								
						COLDR	TRANS.	DIR.	OR	(mbs		DRY	BUI	Li CODE	DEPTHS	DBSER	VATIONS								
								36	S05	26	1 2	11	17	72 8	19										
	MESSENGR		CARD	DEPTH (m)		*c	1	•/••	SIGMA	4	SPECIFI	C VOLUN	4E	₹ △ D DYN, M.		מאט	02 ml/1	PO4		OTA L-P	NO2-N	NO3-N	SI D4-51	рН	S.
	HR 1/10	NO.	TYPE	Derin (m)			,		310/412	_,	ANON	ALY-X10	1	X 10 ³	VEL	DCITY	02	n8 -	4/10	u0 - 01/1	νg - ο!/i	yg - oi/1	μg = 01/1		С
	195		STD OBS	0000		036	35	15 150	2480		003	31575)	0000		233									
	19:	,	STE			034	35		248		003	31546	5	0032		234									
	199	5	OBS	0010		034		152	248						15	234									
			STE			031	35		248			31520		0063		235									
			STD			2030	35		248		00.	31574	+	0095		236									
	19	5	085 STE	0030		2030	35	144	248		00:	31624	fs.	0158		236									
	19	5	085	0050		2032		154	248		00.	102	•	0170		240									
			STE			2028	35		248		000	3169	1	0237	15	243									
	19	5	OBS	0075		2028		143	248							243									
			STE			756	34		252		007	2787	7	0311		166									
	19	5	085 510	0101		1747	34	755 61	252		00	2660	1	0380		163									
			STO			1539	34		2550			2538		0445		104									
	19	5	OBS	0153		1526	34	453	255	1						100									
			ST			1328	34		257		002	2325	7	0566		041									
	19	5	085	0207		1300	34 34	163	2570		0.0	2000	2	0074		978									
			STO			960	34		263			1763		0768		927									
	19	5	OBS	0307		941		083	263					0.00		921									
			STE	0400	(781	34	01	265	4	0.0	1565	9	0935		875									
	19	5	obs	T0408		768		000	265					. //		871									
			STI			0618	34 34		267 269			1351. 1182:		1081 1207		+827 +796									
	19	5	085	T0607		1493		052	269		00	1102	_	1207		+794									
			STI)449	34		270		00	1058	3	1319		+793									
			ST	0800	() + 09	34		272		0.0	0946.	2	1420		+794									
	19	5	OBS	0810		0406		256	272			0057		1510		+795									
			STI			0383	34 34		273			0857i 0783i		1510 1592		+801									
	19	5	085	71019		352		425	274		00	0105	0	1072		+809									
			ST			322	34		274		00	0713	6	1667	14	810									
			STI			0290	34		275			0661		1736		814									
			STO)265	34		275			0617		1799		+820									
	19	_	STI 0BS	1400 11487		0246	34	567	276 276		00	0578	8	1859		+829 +839									
	13	9	STI			0235		57	276		0.0	0556	6	1916		841									
	25	1	oBs	T1734		229		598	276	5					14	+879									
			STI			0227		60	276			0537		2053		+881									
	2.5	,	ST			0199		61	276		00	0507	2	2183		4911 4937									
	25	1	085 STI	2191		0183		619	277		0.0	0479	1	2430		4983									
	25	1	085	2745		0159		621	277		- 0		*			5021									
			ST			0155		63	277		00	0471	8	2668		5064									
	25	_	OBS	T3300		0152		633	277							5115									
	25	1	OBS	T3891		0150	34	665	277	6					1	5218									

REFERENCE	SHIP			- 5	MARS	DEN	STAT	ION T	IME		T	ORIGI	NATOR	'5	DEPTH	MAX		W	A V E	WEA-	CLOUD			11000	
TRY ID.	CODE	LATITUD		ACITUOE FOR	500.			GMTI		YEAR		JISE	STATI		TO	DEPTI	1 0	BSERV	ATIONS	THER	CODES			STATION	
-			1/10	1710	10.	1°	MO (DAY H	R,1/10			10.	NUMI	ER	80110/	" S'MPL	'S DIR	HC	T PER SE	CODE	TYPE AM	7		NUMBER	
31 118	KL	30020	ON 14	0000W	123	00	12	07	193	1967	7 N	11 00	07		4390) 16	3 5	5 1	4		6 7		-	0007	
						WAI	ER	٧	VIND	BAR	0-	AIR T	EMP. 1		NO.	-		٦.					1	0007	
						COLOR	TRANS.	OIR.	SPEED	10161		ORY	WE		OBS.	OBCCB	ECIAL VATION:	s							
					-	CODE	340.1	7.5	FORCE		_	BULB	BUI			<u> </u>		4							
		, ,						05	512	26	1	211	16	1 7	14										
	MESSENGR TIME C	CAST	CARD	OEPTH (m)	т	°C		٠/	510	VA-I		CIFIC VOL		₹ ∆ C	sc	UND			PO4-P	TOTAL-P	NO2-N	NO3-N	5104~		5
	HR 1/10	NO.	TYPE				1		3107	VI M.— I	Ah	IOMALY~1	107	х 10 ³	N. AEI	OCITY.	03 ml		1/10 - 01/1	µg = 01/1	μg ~ σ!/I	μg - σ1/i	NG - 0		C
									1									-						+	\mathbb{H}
	1	' '	STD	0000	21	007	35	11	24	84	0	03116	69	000	n 14	224		- 1	- 1					1	11
	193		OBS	0000	21	007		105	24	84	Ŭ			000		224									
	193		OBS	0009	2	800	35	108	24	84						226									
			STD	0010	21	800	35	11	24	84	0	03120	8 0	003		226									
			STO	0020	21	105	35	11	24	84	0	03125	58	006.	2 19	228									
			STD	0030		800	35		24	84	0	03130	00	009	4 15	230									
	193		OBS	0034		866		104	24	84					15	230									
			STD	0050		800	35		24	84	0	03140	CC	015	5 15	233									
	193		OBS	0054		800	35		24						15	233									
	102		STD	0075		088	341		24		0	0300	75	023		198									
	193		OBS	0079		859	348		25							193									
	193		STD	0100 0108		773 738	348	_	25.		0	02783	36	030		171									
	173		STD	0108		660	348		25							162									
			STD	0150		541	346		25. 25.			02657	_	0374		140									
	193		OBS	0158		502	344		25		0	02542	2 9	0439		105									
			STD	0200		269	341		25		0.	02234	. 1	0558		020									
	193		OBS	T0221		175	340		25		01	0 2 2 3 2	+ 1	0250		991									
			STD	0250		03	340		26		0.0	2000	12	0664		970									
			STD	0300		86	340		26.			01806		0759		936									
	193		OBS	0326	0.9	30	340	92	26	38						920									
			STD	0400	0 -	785	340	2	26	55	01	01562	2.2	0928		876									
	193		OBS	T0449	0 -	702	339	96	266	65						852									
			STD	0500	06	27	340	2	26	77	0.0	01355	8	1073		831									
			STD	0600	0 :	09	340	18	26	96	0.0	01172	2.5	1200) 14	008									
	193		OBS	T0661	0.4	56	341	29	270	06					14	789									
			STD	0700		40	341		27	11	0.0	01032	8 2	1310) 14	789									
	200		STD	0800		03	342		27		0.0	00924	4	1408	3 14	792									
	193		OBS	0875		81	343		27							796									
			STD	0900		75	343		27:			00843		1496		798									
			STD	1000		55	344		27:			00783		1578		807									
	193		OBS	1100 T1101		143	344		274		0 (00732	6	1653		819									
	193		OBS	1650g		143	344		274						14	819									
	1/5		003	10000	0 2	.+0	343	00	276	0.1															

ID.	SHIP	LATITU		LONGITU	0.7	MAR	ARE	STATION T	YE	AR	CRUISE	STAT	ION	DEPTH TO BOTTOM	MAX. DEPTH DF	00	WAVE SERVATIONS	WEA- THER CODE	CODES		51	ATION UMBER	
NO.			1/10		1/10 =	10"	_	MO DAY			NO.	NUN	ABER		S'MPL"	S DIR.	HGT PER SI	A	TYPE A AA				
1185	KL	2910	ION	14005	50W	087	901	12 08	222 19	967				3722	16	32	13		6 6			0008	
							WAI	ER	VIND	BAR	0.	EMP.	V15.	NO.	5 P E	CIAL							
							COLDR	TRANS DIR.	SPEED	METI			VET CODE	DBS. DEPTHS	OBSER)	ATIONS							
							CDDE	08	S15	22				14									
								00	313	~ ~	4 200	1 -	72 8	1 -4									
	MESSENGR		CARD		EPTH (m.)	1	°C	5 */	SIGMA	_T	SPECIFIC VO		₹ △ D DYN. M	501	DNL	D 2 m1/	PO4~P	TOTAL-P		NO3-N	SI 0 4~\$1	рН	S C
	HR 1/10	ND.	TYPE	"			_				ANOMALY-	110'	X 10 ³	VELL	CITY		yg = at/l	yg - at/1	h8 = 01/1	µg = a1/1	μg = σt/1		C
	1	1	ST	0 0	0000	' 2	130	3531	246	7	00328	46	0000	15	260		1						
	222	2	OBS		0000		130	35309	246						260								
			ST	D (3010		132	3534	2468	3	00327	06	0033	15	262								
	222	2	OBS		0011	2	132	35345	2469	9				15	262								
			ST	D (0020	2	132	3535	246	9	00326	63	0065	15	264								
			ST	D (0030	2	131	3535	2470)	00326	65	0098		265								
	222	2	OBS		0030		131	35353	2470						265								
			ST		0050	2	131	3535	246	7	00327	60	0164		269								
	222	2	OBS		0051		131	35348	246						269								
			ST		0075		030	3511	2479	9	00319	80	0244		243								
	227	2	OBS		0078		014	35095	248						239								
			ST		0100		.876	3505	2514		00286	85	0320		204								
	227	2	OBS		0102		.865	35040	2516						201								
			ST		0125		775	3489	252		00275		0391		177								
			ST		0150		676	3474	253		00264	63	0458		150								
	22	2	085		0150		676	34735	253						150								
			ST		0200		478	3445	256		00244	17	0585		093								
	222	2	OBS		0200		478	34446	256			5 D	0.710.0		093								
			ST		0250		245	3425	259		00213	52	0700		022								
	223	2	OBS		0296		.072	34130	261		00101	0.2	0001		967								
			ST		0300		.061	3412	261		00191		0801		964								
	2.2	2	ST		0400		824	3403	2650		00161	44	0977		891								
	223	۷	QBS		0400		824	34028	2650		00125	()	1120		891								
			ST		0500)640)512	3404 3406	267		00135		1126		836								
	22	2	ST OBS		0600 0603		509	3406	269		00119	1.0	1403		800								
	22	۷	ST		0700		1509	3418	270		00106	36	1366		803								
			ST		0800		437	3428	272		00106		1467		806								
	22	2	085		0818)431	34295			00072	, ,	1,401		807								
		_	ST		0900		404	3436	273		00086	75	1558		810								
			ST		1000		374	3442	273		00079		1641		815								
	22	2	OBS		1023		367	34434			00017	-	10 11		816								
			ST		1100		346	3445	274		00074	72	1718		820								
			ST		1200		322	3448	274		00070		1791		827								
			ST		1300		301	3450	275		00067		1860	14	835								
			ST		1400		282	3452	275		00063		1926	14	844								
			ST		1500		267	3455	275		00060		1988		855								
	22.	2	089		1629		252	34579	276	1				14	871								

															_											,
REFERENCE	SHIP	LATITUDE	10	NGITUDE BOLLIDA	MARS	ARE	TAT2	ON T	IME	YEAR	_	ORIGIN				DEPTH	MAX.	08		AVE ATIONS	WEA-	CLOUD			NODC	
CODE NO.	CODE	1/		1/10	10*		MO D		8.1/10	1100			ITAT2 MUM			BOTTOM	OF S'MPL"S			T PER SEA	CODE	TYPE AM	7		HUMBER	
311185	KL	290200	y 14	.0005W	087	90		_	194	196	7 N	111 00	10			4207	19	14				6 3			0000	1
1 21/110.	7	270206	, 1-		001	WAI			VIND		-	AIR TE		to T	_				1 +	121	1	1 013	1	- 1	0009	11
						COLOR	TRANS.	DIR.	SPEED	BA1		DRY	w	_	VIS.	OBS.	OBSERV	LAIC								
						CODE	(105)	DIK,	FORCI	E (mi	bs)	81178	BU	LB .		DEPTHS	0.000									
								09	\$09	2:	27	206	1	94	8	14										
	MESSENG	CAST	CARD	ĺ	Τ.		Τ.		Τ		1 591	ECIFIC VOLU	2441	₹ △ DYN.	7 0	SOL	IND			PO4-P	TOTA L-P	NO2-N	NO. N	5104-5		S
	HR 1/10	or NO.	TYPE	DEPTH (m)	1	,C	s	*/	SIG	MA-T		NOMALY-X		DYN.	. M.		CITY	02 ml/		10 - 01/1	μg + 01/1	μg - ot/l	NO3-N	ug - m1/		C
	17.5				+				1		+-				_	-			+	-					+	+
	Ī	1 1	STO	0000	2	128	351	3.5	24	70	1	003251	0	00	00	15	260		- 1	- 1	- 1			[1	1
	19	4 (085	0000		128	353			70		000201	. 7	00	00		260									
			STD	0010		127	353	35		70	0	03253	17	00	33		261									
	19	4 (085	0015	2	127	353	347		70							262									
			STD	0020		127	35	34	24	70	0	03258	3	00	65		263									
			STD	0030		126	351			70	0	03264	6	00	98		264									
	19	4 (285	0039		126	353			70	_		7	0.1			265									
	19	, (STD	0050 0064		086 027	352	30 130		73 81	U	003245	1	01	63		255									
	19	4 (STD	0075		962	350			93	^	003056	. 2	02	4.2		241 224									
	19	4 (085	0098		852	349			14		00 30 36	0 4	02	42		196									
		7	STO	0100		847	349			15	0	002855	3	03	15		195									
			STD	0125		774	349			29		02733		03			177									
	19	4 (ายร	0128		764	349			31					-		174									
			STD	0150	1	668	346	9		37	0	02661	0	04	53		147									
	19	4 (DBS	0191	1	476	341	369	25	56						15	090									
			STD	0200		421	343			64		002416		05			073									
			STD	0250		161	34			99	C	002082	8	06	92		991									
	19	4 (DBS	0255		139		90		02				. ~			984									
	19	4 (STD BS	0300 0384		037 859	34(160		19	C	001898	86	07	92		955 902									
	- 17	•	STD	0400		824	34(52	_	01595	. 0	09	66		892									
			STD	0500		640	340	-		74		01382		11			836									
	19	4 ()BS	T0516		616	340			76							829									
			STO	0600	0	548	343	.1	26	94	0	01198	9	12	44		817									
			STD	0700	0	481	342	22	27	10	0	01044	9	13	57	14	807									
	19	4 (BS	T0772		442	342			19							804									
			STD	0800		434	343			22		00938		14			805									
			STO	0900		406	343			30		00862		15	-		811									
	1.0		STO	1000		379	344			37	0	00801	9	16	29		817									
	19	4 (BS	1035		370	344			39	^	007/-	2	1.7	0.		819									
			STO STD	1100 1200		354 331	344			43)00743)00694		17			824 831									
	19	4 (185	11290		311	345			52	U	000094	1	1 /	18		838									
			STD	1300		309	345			52	0	00660	13	18	46		839									
			STD	1400		289	345			54		00645		19			847									
			STD	1500	0	271	345	2		55		00632		19			856									
			STD	1750	0	233	345	2	27	58	0	00606	0	21	30	14.	882									
	19	4 (BS	T1946	0	211	345	10	27	59						14	906									

REFER	ENICE								ORIGINA	70015		MAX.			1					
CTRY	ID.	SHIP	LATITUD	DE LOI	NGITUDE TO	MARSDEN	STATION TO	YEAR		TATION	DEPTH	DEPTH	OESI	WAVE RVATIONS	WEA-	CLOUG		S	NDDC IATION	
CODE	ND.	CODE		1/10	1/10	10° 1°	NO DAY HE	2.1/10		UMBER	ROTTOM	DF S'MPL'S	DIR	HGT PER! SEA	CODE	TYPE AMT	1		UMBER	
31	1185	KŁ	30010	ON 14	0050W			02 1967	N11 010	0	6856	15	14	1 2	18	8 3			0010	
		- 1		- 1		WAT		IND	A ID TEN	17. °C	NO.			- 1 - 1	,	, ,,,		- 1	0010;	
						COLDR		SPEED MARTI	0-	WET COD	085.	SPEC DBSERVA								
						CODE	IRANS DIR.	FORCE (mb		BULB	DEPTHS	Dogento								
							11	S11 24	4 211	194 8	14									
		MESSENGR			T	T		T		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	-			00 0						7,
		113/16 0	ND.	CARD	DEPTH (m)	T *C	5 %.	SIGMA-T	ANOMALY-X10	7 DIN. N	. SOU!		D2 ml/l	PD4-P	101AL-P ug - at/]	NO2-N ug - at/i	NO3-N .	\$1 O4-\$1 ug = a1/1	pН	c
		HR 1/10	-							X 10 ³		-		-		-	74 0			4
										_						l			l	11
		7.00		STD	0000	2039	3520	2483	003132	5 0000	_									
		202		OBS	0000	2039	35195	2483			152									
				STD	0010	2045	3521	2482	003141	4 0031										
		202		OBS	0011	2045	35208	2482			152									
				SID	0020	2043	3521	2482	003142											
				STD	0030	2041	3520	2483	003144	1 0094										
		202		OBS	0030	2041	35201	2483			152									
		202		OBS	0047	2040	35199	2483			152									
		202		STD	0050	2040	3520	2483	003149	4 0157										
		202		085	0074	2037	35199	2483			152									
		202		STD	0075	2021	3518	2486	003124	6 0236										
		202		OBS	0096 0100	1749	34785	2525	002764	3 0309	151									
				SID	0125	1749	3478	2525	002764											
				STD	0125	1709 1607	3473 3458	2530 2543	002716											
		202		OBS	0153	1590	34561		0026051	6 0444										
		202		OBS	0188	1329	34204	2545 2574			151 150									
		202		SID	0200	1281	3419	2582	0022350	0 0565										
				STD	0250	1103	3415	2613	001950											
		202		OBS	0280	1012	34121	2627	001770	_ 0010	149									
		202		SID	0300	0964	3410	2633	001762	5 0763										
		202		OBS	0372	0809	34025	2652	001102	, ,,,,	148									
				SID	0400	0759	3403	2659	001520	6 0927										
				STD	0500	0609	3403	2679	001328											
		202		OBS	10575	0524	34025	2690	001520		148									
				STD	0600	0506	3406	2695	001183	7 1199										
				STD	0700	0444	3418	2711	001030											
		202		OBS	0757	0417	34240	2719			147									
				STD	0800	0406	3427	2722	000927	8 1403	147	793								
				STD	0900	0380	3435	2731	000846											
		202		085	T0952	0368	34380	2735			148									
				STD	1000	0357	3441	2738	000783	6 1574										
				STD	1100	0335	3446	2744	000728											
				STD	1200	0316	3450	2749	000683											
				STD	1300	0297	3454	2754	000638											
				STD	1400	0281	3456	2757	000611											
		202		085	T1484	0269	34569	2759			148									

		10.	SHIP	LATITUD	LO		DRIFT	MAR	SOEN	TATE	ION TIN		re ar	CRUI		TATIO	NC	DEPT TO BOTTO	OF	H 08	WAVE		WEA- THER COOE	CLOUD		5	NODC TATION UMBER	
	E	NO.	0001		/10	1/10	Z	10"	1.	MO	DAY HR.	1/10		NC	0.	MUM	BER	80110	M S'MPI	L*S DIR.		_	0000	TYPE A.M			OWIGEK	
	11	185	KL	30010	N 14	0050W		123	00	12	11 1	92 1	967	N1	1 01	1		475	5 1	7 14	2 2			8 5			0011	
COLOR Invite COLOR Invite COLOR Invite COLOR Invite COLOR Invite COLOR									WAT	ER	WI	NĎ	RAS	n- L	AIR TE	MP. 1				SCIAL	}							
									COLOR	TRANS.		OR	MET	ER		WI	ET COD		OBCCD									
									CODE	(m)	1	FORCE	-	_		_		-			-							
NE 1/10 No.										11	S15	22	0	189	1	78 8	14			1								
NE 1/10 No.		MESSENGE	CASI	CARD			Π.			.,			SPECI	IFIC VOLU	M.E	₹ △ 0	s	аиио		, PO4	-P 10	OTA L-P	NO2-N	NO3-N	SI O4-SI		S	
SID OOO		- 1	TIME	NO.		DEPTH 0	m)	T	C	7	٠/٠٠	SIGM	A-T	ANO	DMALY-X	07	X 103	, VI		02 mi/							PH	c
192		-	MK 1/10													-		+-		-		\rightarrow				-		+
192		1			CID	0000	n i	,	037	35	21	248	4	1	13115	٥	0000	1	5234	1	- 1	- 1				1	I	11
STD O010 2038 3521 2484 O031200 O031 15236 STD O020 2038 3521 2484 O031252 O062 15237 STD O030 2039 3521 2484 O031308 O094 15239 STD O050 2039 3521 2484 O031308 O094 15239 STO O050 2039 3521 2484 O031396 O166 15243 STO O050 2039 3521 2484 O031396 O166 15243 STO O050 2039 3521 2484 O031396 O166 15243 STO O075 1865 3501 2514 O028625 O231 15196 STO O075 1865 3501 2514 O028625 O231 15196 STO O100 1706 34777 2534 O026730 O301 15151 STO O150 1679 34722 2537 O25112 O431 O2512 STO O150 1533 3449 2553 O025112 O431 O2512 STO O200 1235 3416 2589 O25101 O548 15009 STO O200 1235 3416 2589 O2510 O367 O367 O367 STO O250 O377 3410 2596 O3670 O367 O367 O367 STO O300 O959 3408 2632 O01769 O743 14961 STO O400 O764 3400 2656 O015463 O999 14868 STO O400 O460 3408 2701 O01137 O173		192											0.0	,,,,,	,	0000												
192			1,2			-								0.0	3120	10	0031											
STD 0020 2038 3521 2484 0031252 0062 15237			192																									
STD 0030 2039 3521 2484 0031308 0094 15239 15240 1			1,2		-									0.0	3125	2	0062											
192																	-											
STO 0050 2039 3521 2484 0031396 0156 15243 1			192													-												
STD OO75 1865 3501 2514 OO28625 O231 15196			1/6											0.0	3139	6	0156											
STO			192		OBS	005	3	2	039	35	204	248	13					1	5243									
STO 0100 1706 3477 2534 0026730 0301 15151 192 085 0105 1679 34722 2537 15143 STO 0125 1626 3462 2541 0026107 0367 15129 STO 0150 1533 3449 2553 0025112 0431 15103 192 085 0158 1497 34442 2557 15092 STO 0200 1235 3416 2589 0021701 0548 15009 192 085 0212 1175 34104 2596 14989 STO 0250 1077 3410 2614 0019417 0651 14961 STO 0300 0959 3408 2632 0017691 0743 14926 192 085 0320 0915 34073 2639 14913 STD 0400 0764 3400 2656 0015463 0909 14868 192 085 0427 0717 33987 2662 14854 STD 0500 0588 3402 2682 0013048 1052 14815 STD 0500 0400 3408 2701 0011137 1173 14780 192 085 0651 0415 34116 2709 14770 STD 0700 0411 3417 2714 0009992 1278 14777 STD 0800 0399 3426 2722 0009271 1374 14790 192 085 0874 0388 34318 2728 14790 STD 0000 0383 3434 2730 0008607 1464 14801 STD 1000 0340 34467 2744 0007301 1623 14818 192 085 71101 0340 34467 2744 0007301 1623 14818 STD 1200 0321 3449 2748 0006993 1694 14827 STD 1300 0303 3451 2751 0006702 1763 14866 STD 1400 0286 3453 2754 0006418 1829 14846 STD 1500 0270 3455 2757 0006141 1891 14856						007	5	1	865	35	01	251	4	00	2862	5	023	1	5196									
192			192		085	008	1			34	959																	
STD 0125					STD	010	0	1	706	34	77	253	4	0.0	2673	0	030	1	5151									
STD			192	?	OBS																							
192																												
STD O200 1235 3416 2589 O021701 O548 15009 192 O85 O212 1175 34104 2596					-									00	2511	2	043											
192			192	2																								
STD O250 1077 3410 2614 O019417 O651 14961 STD O300 O959 3408 2632 O017691 O743 14926 192 OBS O320 O915 34073 2639														0.0	2170	1	0548											
STD			192	2					_							_												
192																												
STD 0400 0764 3400 2656 0015463 0909 14868 14854 1										_	-			00	01769	1	0 74											
192			192		_									0.0	1566	2	000											
STD O500 O588 3402 2682 O013048 1052 14815 STD O600 O460 3408 2701 O011137 1173 14780 192 OBS O651 O415 34116 2709 14770 STD O700 O411 3417 2714 O009992 1278 14777 STD O800 O399 3426 2722 O009271 1374 14790 192 O85 O874 O388 34318 2728 14799 STD O900 O383 3434 2730 O008607 1464 14801 STD 1000 O361 3440 2737 O007953 1547 14809 STD 1000 O340 3447 2744 O007301 1623 14818 192 O85 T1101 O340 34467 2744 STD 1200 O321 3449 2748 O006993 1694 14827 STD 1300 O3303 3451 2751 O006702 1763 14836 STD 1400 O286 3453 2754 O006418 1829 14846 STD 1500 O270 3455 2757 O006141 1891 14856 STD 1500 O270 3455 2757 O006141 1891 14856 STD 1400 O286 3453 2754 O006418 1829 14866 STD 1500 O270 3455 2757 O006141 1891 14856 STD 1400 O286 3453 2754 O006418 1829 14866 STD 1500 O270 3455 2757 O006141 1891 14856 STD 1400 O286 O270 O266 O270		100											U	11746	0.5	090												
STD O600 O460 3408 2701 O011137 1173 14780			192											0.0	11304	8	105											
192																												
STD 0700 0411 3417 2714 0009992 1278 14777 STD 0800 0399 3426 2722 0009271 1374 14790 192 085 0874 0388 34318 2728 STD 0900 0383 3434 2730 0008607 1464 14801 STD 1000 0361 3440 2737 0007953 1547 14809 STD 1100 0340 3447 2744 0007301 1623 14818 192 085 T1101 0340 34467 2744 085 T10 1200 0321 3449 2748 0006993 1694 14827 STD 1300 0303 3451 2751 0006702 1763 14836 STD 1400 0286 3453 2754 0006418 1829 14846 STD 1500 0270 3455 2757 0006141 1891 14856			19:	,										0(, ,	1.											
STD 0800 0399 3426 2722 0009271 1374 14790 192 085 0874 0388 34318 2728 14799 STD 0900 0383 3434 2730 0008607 1464 14801 STD 1000 0361 3440 2737 0007953 1547 14809 STD 1100 0340 3447 2744 0007301 1623 14818 192 085 71101 0340 34467 2744 STD 1200 0321 3449 2748 0006993 1694 14827 STD 1300 0303 3451 2751 0006702 1763 14836 STD 1400 0286 3453 2754 0006418 1829 14846 STD 1500 0270 3455 2757 0006141 1891 14856			1 7 2											0.0	00999	2	127											
192																												
STD 0900 0383 3434 2730 0008607 1464 14801			192	2																								
STD 1100 0340 3447 2744 0007301 1623 14818 192 085 T1101 0340 34467 2744 14818 STD 1200 0321 3449 2748 0006993 1694 14827 STD 1300 0303 3451 2751 0006702 1763 14836 STD 1400 0286 3453 2754 0006418 1829 14846 STD 1500 0270 3455 2757 0006141 1891 14856								(383					0.0	00860	7	146	+ 1	4801									
192 OBS T1101 0340 34467 2744 14818 STD 1200 0321 3449 2748 0006993 1694 14827 STD 1300 0303 3451 2751 0006702 1763 14836 STD 1400 0286 3453 2754 0006418 1829 14846 STD 1500 0270 3455 2757 0006141 1891 14856						100	0	0	361	34	40	273	37	00	0795	3	154	7 1	4809									
STD 1200 0321 3449 2748 0006993 1694 14827 STD 1300 0303 3451 2751 0006702 1763 14836 STD 1400 0286 3453 2754 0006418 1829 14846 STD 1500 0270 3455 2757 0006141 1891 14856					STD	110	0	0	340	34	47	274	4	0.0	00730	1	162	3 1	4818									
STO 1300 0303 3451 2751 0006702 1763 14836 STO 1400 0286 3453 2754 0006418 1829 14846 STO 1500 0270 3455 2757 0006141 1891 14856			192	2	OBS	T110	1	0	340	34	467	274	+4					1	4818									
STD 1400 0286 3453 2754 0006418 1829 14846 STD 1500 0270 3455 2757 0006141 1891 14856					STD	120	0	C	321	34	49	274	8	00	00699	13	169	4 1	4827									
STD 1500 0270 3455 2757 0006141 1891 14856					_																							
192 085 71707 0240 34589 2763 14879														0.0	00614	1	189											
			192	2	OBS	T170	7	C	1240	34	589	276	3					1	4879									

RENC	.	SHIP	LATITU		ONGITUDE DIRECT	MARSDEN SOUARE	STATION) YEAR	CRUISE S	ATOR'S	DEPTH DEPT TO OF BOTTOM CIAR BY	H DB	WAVE SERVATIONS	CODI	CODES		5	NDDC TATION IUMBER
N(,	-		1/10	1/10	10, 1,	MO DAY	HR,1/10		NU MBER	S'MPI	'S DIR	HGT PER S	EA COO	TYPE AM			
1 1	85	KL	2958	ON 1	40000W	087 90	12 14	189 196	7 N11 01	2	4572 1	80 6	1 2		6 8			0012
						W	ATER	WIND BAS	RO- AIR TE	WP. °C	NO. SE	ECIAL						
						COLO	R TRANS DIR			WET COD		VATIONS						
						CODE		10.00										
	_						11	520 2	10 200	183 8	14							
	~	AESSEMGR	CAST	CARD	DEPTH (m)	т *с	5 %.	SIGMA-T	SPECIFIC VOLU	ME ₹AD	SOUND	0	, PO4-P	TOTAL-F	NO2-N	NO3-N	S1 O4-Si	
		TIME 0	T NO.	TYPE	DEPTH ON	, ,	,	SIGMATI	ANOMALY-RI	ME DYN. N DYN. N X 10 ³	VELOCITY	D2 m1/	yg = a1/1	yg - a1/1		µg - at/l	yg - at/l	pH
	F					1					<u> </u>							
	- 1		' '	STO	0000	2017	3518	2487	003086	3 0000	15228	I	ı	I	l i			1
		189	9	085	0000	2017	35182		003000	5 0000	15228							
				STO		2018	3518	2487	003091	4 0031								
		189	7	OBS	0011	2018	35183				15230							
				STO	0020	2019	3518	2487	003099	9 0062								
		189)	OBS	0028	2020												
				STD		2020	3518	2487	003106	0 0093	15234							
		189	9	OBS	0045	2020	35176				15236							
				STO		2019	3517	2486	003115	9 0159								
		189	9	OBS	0068	2016	35160				15239							
				STO		1895	3495	2501	002978	5 0231								
		189	9	OBS	8800	1723	34667				15153							
				STO		1710	3466	2525	002760									
		189	,	085	0125 0131	1649 1628	3465 34648	2539	002639	1 0371								
		109	7	STD		1517	3448	2543 2555	002484	6 0435	15131 15097							
		189	2	085	0178	1371	34277		002404	0 043:	15052							
		10,	,	STO		1285	3423	2585	002213	4 0552								
				STO		1112	3413	2610	001980									
		189	9	OBS	0274	1042	34098		001700	, 00)	14952							
		-0/		STO		0985	3407	2627	001819	0 0752								
		189	9	OBS	0376	0830	34012		001017	0 012.	14889							
				STC		0782	3402	2655	001560	0 0921								
				STE		0612	3404	2680	001321									
		189	9	OBS	T0589	0504	34060				14796							
				STO		0498	3407	2696	001166	5 1189								
				STO	0700	0447	3418	2711	001033	7 1299	14793							
		189	9	OBS	0791	0411	34270				14794							
				STD		0409	3428	2723	000923									
				STO		0388	3437	2732	000841	3 1489								
		189	9	OBS	T0996	0368	34442				14812							
				STO		0367	3444	2740	000770									
				STD		0347	3447	2744	000738									
				STE		0327	3449	2747	000704									
				STD		0307	3451	2751	000671									
				STO		0288	3454	2755	000638									
		189		STD OBS	1500 T1558	0270	3456 34572	2 ⁷ 58 2 760	000605	3 1910	14856 14862							

										_				V	aca										
REFERENCE	SHIP	LATITU	05	LONGITUDE		RSDEN		ION T		YEAR			NATOR'		OEPTH	MAX, DEPTH		WAY		WEA	- CLOU			NODC	1
CODE NO.	CODE		1/10	1/10	10*				HR,1/10	TEAR	PL-N.		STATIO		BOTTOM	0.0	1		PER SI	THER COO				STATION NUMBER	
311185	5 KL	3001	ON :	13959Ch	124	(0)	12	15	191	196	7 N	11 0	13		4572	14	1	+	2		6 6			0013	
						WAI	ER	V	MIND		RO-		MP. °C	VIS.	NO.		CIAL	'	- 1		, 0.0		'	0013	н
						COLOR	FRANS.	D1R,	OR FORCE	1 7711	ETER (ba)	DRY BULB	W E1	COD	OBS, DEPTHS	OBSERV	ATIONS								
								07	\$15	2	20	183	15	ó 8	14										
	MESSENGR TIME HR 1/10	CAST OF NO.	CARD TYPE	DEPTH (m	1	o 'c	S	٠/	SIG	MA-T		CIFIC VOLI		₹ △ D DYN, <i>N</i> x 10 ³	SOL VELO	CITY	0 2 ml/		04~P - 01/I	TOTAL-P	NO2-N ug - al/l	NO3-N			200
																						· · · ·		+-	+
	1.0.1		ST3			8009	35			89	. 0	03069	94	0000	15	226		1				'	1	1	
	191		OE'S OBS	0000		2013	35			8?						226									
	191	L	SIC			2013	352 35 2			90	0	03066	. ,	00 7 1		228									
			510			2013	35			89		03066 030 7 7		0031 0061		229									
	191	}	CBS	0026	2	2013	35			89	_	0 2 0		0001		231									
			STL	0030	2	012	351	19	24	89	0	03082	22	0092		232									
	191	l.	OBS	0041		010	351			89						233									
	101		STI			2010	351			89	0	03087	73	0154		234									
	191	L	OBS STO	0060		2009	351			89						236									
	191		OBS	0084		973	350 350			91 96	0	03076	3	0231		227									
	171		STE			801	348			17	0.	02841	0	0305		2 1 7									
	191		OBS	0122		646	346			38	01	02041	. 7	000		135									
			STD			631	346			39	01	02636	3	373		130									
			STD	0150	1	508	344	1		52		2516		0438		094									
	191	l	OBS	0163		448	343	329	25	59					15	076									
			STD			285	341		25	81	0 (2250	0 0	0557	15	026									
	101		STD			102	340			05	0.0	2019	7)664	14	969									
	191		OBS STO	0250		102	340		26			70 .	-			969									
	191		OBS	0333		968	340			29	01	01798	55	759		929									
			STD			764	339		26 26		0.0	01575	. 0	928		905 867									
			STD			613	339		26			01411		1077		824									
	191		OBS	T0505		607	339		26		٠,٠	1		- 1 1		822									
			STD	0600	0	512	340	5	26		0.0	1198	4	208											
	191		OBS	0688		447	341		27							790									
			STD			442	341		27			1035		1319		790									
	191		STD			407	342		27		0(00929	0	1418		794									
	191		08S ST0	0874		384	343		27		0.0	00934	7	500		797									
			STD			350	344		27 27			00834 00760		1506 1586		798									
			STO			327	344		27			0697		1286											
			STO			309	345		27			0653		1726		322									
			STD			295	345		27			0629		790											
	191		OBS	T1378		287	345		27			, ,		, 0	148										

TABLE VIII. Observed and interpolated oceanographic data for stations taken by USCGC TANEY at Ocean Station NOVEMBER, 7-28 January 1968, prepared from NODC Listing No. 31-1200 RT.

REFERENCE	SHIP			=======================================	MARSOEN	STATION TIME			ATOR'S	OEPTH	MAX. DEPTH	000	WAVE	WEA-	CLOUD			NOOC	
CODE NO.	CODE	LATITU	1/10	ONGITUDE S	L	(GMT)	YEAR		STATION NUMBER	TO BOTTOM	0.5	1	HGT PER SE	THER	TYPE AM			TATION	
31120	ORT	3000		4001 W	123 00	MO OAY HR.1				-	13 W. F. 2			^		1		1	
Falle	9	31,,,,(,4 1	4001 W	123 00					3840	16	13	3 4	X1	6 6	1		0001	
					COLOR		BAR MET	0	MP. °C	NO. OBS.		IAL							
					COOF	TRAINS DIR.	ORCE (mb		BULB COI	DEPTHS	OBSERV	A HONS							
						-	17 25	1 167	156 8	14									
	MESSENGR			1	T				< A /									1	T.
	TIME	CAST NO.	CARD	OEPTH (m)	τ ℃	s *4.	SIGMA-T	ANOMALY-X		W. VELO	DCITY	02 ml/l	PO4-P µg • 01/1	10TAL-P ug - 01/1	NO2-N ug - ot/i	NO3-N pg - at/I	\$1 O4~51	pН	ç
	HR 1/10				1000	2522	0511		_				177			pg 0.71	-		H
	000		STD OBS	0000	1939	3522 35217	2511	002866	6 000		207								[]
	009		085	0000	1940	35209	2511 2510				207								
	003	7	310		1940	3521	2510	002877	6 002		209								
			510		1940	3521	2510	002879			211								
			STO	0030	1940	3522	2510	002881			212								
	0.00	9	OBS	0032	1940	35216	2510	002001			213								
			STD	0050	1941	3521	2510	002891	9 014		216								
	000	3	085	0050	1941	35213	2510				216								
			STO	7075	1939	3522	2510	002894	7 021	6 15	219								
	000	2	OBS	0078	1939	35215	2510			15	220								
			STD	0100	1941	3521	2510	002911	2 028	9 15	224								
	0.00	3	085	0101	1941	35209	2509				224								
			STO		1784	3490	2525	002766	7 036	0 15	180								
			STO		1647	3466	2540	002635	8 042		140								
	000	3	0B5	0153	1633	34633	2541				136								
	000		STO		1463	3441	2562	002436	8 055		088								
	000	4	0B5	T0204	1448	34394	2564				083								
			STO		1227	3424	2597	002108			015								
	200	3	STD OBS	0300	1036	3412 34107	2622	001867	5 076		955								
	300	7	STD		0821	3403	2650	001608	34 094		890								
	000	5	085	0409	0804	34026	2652	001000	14 074	-	885								
	00;		STO		0640	3403	2676	001365	8 109		836								
			510		0511	3408	2696	001175		-	801								
	000	0	0B5	T0615	0496	34089	2698				797								
			STD		0460	3419	2710	001041	7 132		798								
			STD	0800	0424	3429	2722	000934	1 142	6 14	801								
	300)	OBS	0820	0417	34304	2724				802								
			STD	0900	0395	3436	2730	000856		6 14	806								
			STD	1000	0369	3442	2738	000790	1 159	8 14	813								
	009	9	OB5	T1038	0360	34440	2740			14	816								
			STD	1100	0345	3447	2744	000732			820								
			STD		0323	3451	2749	000684			828								
			STD		0303	3454	2754	000645			837								
			STO		0284	3456	2757	000615			846								
			STD	1500	0267	3457	2759	000593	17 193	5 14	855								

14861

000

OBS

T1556

0258 34570 2760

REFERENCE	SHIP			10101		DCTR	MAR	SDEN	STAT	IDN T	I AA E	Wr a m	I		ATDR	S		DEPTH	MAX. DEPTH		WA	VE ATIONS	WEA				NODC	
CODE NO.	CDDE	LATITU	1/10	LDNGII	17/10		10°	11.			R.1/10	YEAR			STATIC		8	MOTTO	OF S'MPL"			PER SE	THER	TYPE AM			TATION	
311200	DT	3018		1401		1	123				198	1968	+	112 00			-	c 7 2	_					1 1				
1 31/1200	ol Ki I	3010	14	1401	. 7 W	1 1	123	WA			VIND		-	AIR TE				572	07	15	3	4	X5	5 8	1	1	0002	21
								COLOR		_	SPEEC	BAR MET		DRY	WE		VIS.	ND, OBS.		CIAL								
								CDDE	(m)	DIR.	FORC	1 1-1		BUL9	BUL		1	DEPTHS	OBSEKA	A HURS								
										16	525	15	52	183	17	8	7	13										
	MESSENGR	CAST	CARE								T_		T.,	ECIFIC VOL	1145	∑ ∆ DYN	7 0	sou	INID		Τ,	O4-P	TOTAL-P	ND. N		610 6		5
	IIME	약 ND.	TYPE		DEPTH	(m)	T	*C	S	٠/	51G	MA-T	Í.	NOMALY-X	102	DYN.	. M.	VELD		02 ml/l		0 - 01/1	μg = 01/1	NO2-N NO2-N	NO3-N pg - 01/1	SI O4-Si pg = al/I	pН	Ĉ
	HR 1/10			-			-		+		+		+		\rightarrow				-		+					1		-H
		1	ST	n !	000	0	1	899	35	0.6	7 5	509	1	002882	9 9	00	00	15	194		-			1	ì	1	l	1
	198	4	OBS		000			899		060		509		002002	. 0	00	00	15										
	19		035		000			901		071		509							196									
			ST	0	001	0	1	901	35	07		509	(002883	8 8	00	29		196									
			ST	0	002	0	1	899	35	07	2.5	10	(002882	24	00	58	15	197									
			ST		003			898	35			10	(002884	8+	00	86	15	199									
	191	3	OBS		003			898		068		10							199									
			ST		005			900	35			09	(002898	30	01	44	152										
	198	3	OBS		005			900		066		09				. 7			202									
	198	3	ST OBS		007			900	35	060 060		09	(002910) 9	02	1 /	15										
	191		085		007		_	890		034		09						152	207									
	1 /	J	ST		010			875	35			511	0	002899	. 1	02	an	15										
			ST		012			705	34			33		002693		03		15										
	198	3	OBS		014			595		585		46			_	-	,		122									
			ST	D	015	0	1	577	34	55		47	(002562	20	04	25	15										
	191	3	085		019			430		334		63						15(074									
			ST		020			383	34.			69		02361		05		15										
	10		ST		025			178	34			98	C	002091	6	06	59	149										
	198	3	085		028			081		080		11				. 7		140										
	198	3	ST OBS		030			924	341			319	(001903	5 /	07	59	149										
	136	3	ST		040			806	34			552	-	001593	12	09	2 /	148	922									
	191	٩	085		048			634		976		572		001093	, ,	0 9	J 4	148										
			ST		050			623	33			574	0	001381	6	10	83	148										
			ST		060			531	34			87		01261		12		148										
	198	9	OBS		060			527		998		87					-	148										
	198		OBS		069			454		139		707							794									

REFE	RENCE	SHIP					- =	MARS	DEN	STATION	TIME	T		0	RIGIN	ATOR'S		DEPTH	MAX.		W	AVE	WEA					NODC	
CTRY	10.	CODE	LATITU		LON	GITUOE	DRIF	SOU		(G A			EAR	CRUISE		TATION		TO BOTTOM	. OF			ZNOITAN	THER		- 1		2.	UMBER	
CODE	NO.	-	1	1/10		1/10	=	10"	1°	MO DAY	HR.1/	10		NO.		UMBER		801108	S,Wbr,	S DIR.	HG	T PER SE	A COD	TYPE A	MT		- ''	OWIDEK	4
31	120	ORT	3004	4 N	14	011 W		123	00	01 09	19	9 1	968	N12	00	3		4572	16	15	5 4	4	X4	6 6	5			0003	3
									WAT	TER	WINE)	BARO	A	IR TEA	AP. °C	1	NO.		CIAL	٦.								
									COLOR		tR. SP	EED OR	METER	1 0	YSC	WET	VIS.	OBS.	COSERV	ATION!	s								
									CODE	[m]	10	RCE	(mbs)		UL8	BATB	_	DEFINS			_								
										0	7 S	12	102	2 1	89	189	6	14			-								
		MESSEN	GR CAST	CA			1						T	SPEC IFIC	/01.11	E	Δρ	1 .0	UND		_`_T	P.O P.					210. 5		Is
		TIME	or NO.	TY		DEPTH	(m)	Т	*C	2 .%	• !	IGMA	Y-7	ANOM.	ALY-TI	7 0	△ D rN. M (10 ³	. VEL	OCITY	O ₂ ml		PO4~P	TOTAL-I	NO2-1		3-N - 0!/I	SI O4-Si µg - 01/1	pН	C
		HR 1/	10	-						-	-						10.	-	-		-		-	-	1				-
		1			[1										- 1					-			
			0 -		TD	000			976	3526		250		002	928	4 0	000		218										
		1	99	08		000			976	3525		250				_			218										
		-	0.0		TU	001			976	3527		250		002	924	/ 0	029		219										
		1	99	08		001			976	3526		250		003	034	2 0	0.00		219										
					TD	002			974	3527		250		002			059		220										
		3	99	08	TD	003			972 971	3527 3526		250 250		002	923	2 0	088		222										
		L	44		TD	005			971	3526		250 250		007	0.70	2 0	111		225										
		1	90	0B		005			971	3526		250 250		002	729	5 0	146		225										
		1	7 -		TU	007			943	3519		250		002	021	2 0	219		220										
		1	99	08		008			937	3517		250		002	766	2 0	617		219										
			, ,		TD	310			928	3515		250		002	922	a n	292		220										
		7	99	OB		010			920	3512		250		002	126	, ,	- 72		218										
					TD	012			797	3490		252		002	797	2 0	364		183										
					TD	015			662	3467		253		002			432		145										
		1	99	03	S	015	6	1	632	3461		254							136										
					TD	020	0	1	434	3431		256		002	450	0 0	560		077										
		1	99	03		T020			404	3427		256					, .		068										
				S	TD	025	O	1	225	3418		259	2	002	149	0 0	675	15	014										
				S	TD	030	0	1	056	3410		261	7	001	916	4 0	777	14	962										
		1	99	08	S	031	0	1	028	3409	2 .	262	2					14	953										
				S	TD	040	0	0	859	3404		264	5	001	659	0 0	955	14	905										
		1	99	03	S	041	3	0	836	3403	3 .	264	8					14	898										
				5	TD	050	0	0	663	3405		267	4	001	382	9 1	107	14	845										
				S	TD	060	0		518	3407		269	4	001	194	0 1	236	14	804										
		1	99	0.8	S	T061	5	0	501	3406	9	269	6					14	799										
					TD	070			455	3418		271		001			348	14	796										
				S	TD	080			412	3428		272		000	927	4 1	447	14	796										
		1	99	OB		082			404	3430		272	5					14	797										
					TD	090			388	3435		273		000			536		803										
					TU	100			366	3441		273		000	794	0 1	618		811										
		1	99	0.8		T103			360	3443		274							814										
					TD	110			345	3447		274		000			695		820										
					TU	120			325	3451		274		000			766		829										
					TU	130			305	3454		275		000			832		837										
					TD	140			285	3456		275		000			896		846										
			00		TD	150			266	3457		275		000	592	0 1	956		855										
		1	99	0B	5	T156	2	U	254	3457	5 .	276	1					14	861										

FERENCE	SHIP				- ec	MAR	SOEN		ION TH			-	ORIGINA	TOR'S		OEPTH	MAX		WAY		WEA-	CLOUD			NOOC	
10.	COOF	LATITU		LONG	NOE NOUT	sou	ARE		GMT)	YEA	-	RUISE		ATION		TO BOTTOM	OF	00		TIONS	THER	COOES			TATION	
DE NO.			1/10		1/10 =	10"	1"	MO	AY HE	.1/10	_	NO.	N	UMBER		01107	S MPL	"S D12.	HGT	PER SEA	- 0000	TYPE AM	1		A D WIDER	
1/120	O SI	3000	N	140	04 W	123	00	01	10 1	98 19	68	N12	004	+	- 4	4572	10	11	4	3	45	6 8			0004	
							WA	TER.	W	INO	BARO-		AIR TEM	1P. ℃	VIS.	NO.	50	ECIAL								
							COLOR	TRANS.	DIR,	SPEED A	METER		ORY	WET	COAS	OBS. DEPTHS		VATIONS								
							COOE	(m)		FORCE	(mbs)		_		-		-									
									09	520	135	1	83	183	6	13	L									
	MESSENGI	CAST	CARI	D	0.53311 4-1		°C		٠/		_	PECIFIC	C VOLUN	AE ≥	Δο	soi	UNO	014	, P(04-P	TOTAL-P	NO2-N	NO3-N	\$104-5	,	5
	HR 1/10	NO.	TYPE	E	DEPTH (m)	· '	C	,	'+ s	SIGMA-	-	MONA	OFX-YIA		rN, M. K 10 ³	V€F(OCITY	0 2 ml/			μg - ol/l	μg = at/1	μg = α1/1	µg = a1/		c
	1710			-															+							+
		1	l S1	r rs	0000	1	924	35	10	2512	- 1	000	28544	,	000	1 16	202		-	- 1			I	1	1	11
	19	B	035		0000		924		183	2512		002	0)44	+ 0	000		202									
	19		089		0000		928		181	2511							205									
			51		0010		928	35		2511		002	28689	2 0	029		205									
			S 1		0020		927	35		2511			28689		057		206									
			51		0030		925	35		2511			28690		086		208									
	19	8	033	5	0031	1	925	3.5	181	2511							208									
	19	8	OBS	5	0049	1	925	3.5	185	2512						15	211									
			51	01	0050	j	925	35	19	2512		002	28728	3 0	143	15	211									
	19	8	083		0074		926		182	2511							215									
			S1		0075		925	35		2511		002	28856	5 0	215		215									
	19	8	OBS		0096		908		138	2512							213									
			S 1		-0100		877	35		2516			28492		287		204									
			51		0125		706	34		2533		002	26882	2 0	356		155									
	19	5	OBS		0143		605		584	2544							125									
			\$1		0150		580	34		2547		002	5685	5 0	422		118									
	19	8	OBS		T0193		419		358	2567							072									
			S1		0200		384	34		2572			23341		545		061									
	1.0		S1		0250		167	34		2603		002	20496	5 0	654		994									
	19	8	089		0284		.055	341	98	2617 2621		001	877	7 0	752		959									
	19	D	089		10378		1894		058	2641		001	LOTT	1 0	152		915									
	17	0	S1		0400		1837	34		2650		001	6156	٠ ،	927		897									
			S1		0500		1628	341		2677			3512		075		831									
	19	R	089		T0558		545		013	2686		O U I			015		807									
			S1	-	0600		1520	341		2692		001	2083	3 1	203		804									
			S 1		0700		1468	34		2704			10958		319		801									
	20	3	OBS		0710		1463		140	2706							800									
			51		0800		1425	34.		2716		000	9872	2 1	423		800									
			SI	rD	0900	0	392	34	33	2728		000	8755		516		805									
	20	6	085	5	T0997	0	369	34	432	2739						14	813									

FERENC	_	SHIP	LATITU	DE	LDNGITUDE	CTR	MARSDEN .	STATION	TIME	24.14			ATDR'S		DEPTH	MAX		WAVE	WEA	CLDUD			NODC
IT ID		CODE	*	1/10	1/10	INOCT	10° 1°	MO DAY		YEAR	CRU:		STATION		TO BOTTOM	0.5	00	SERVATIONS	THER	CDDES	7		STATION NUMBER
112	0.0	RT	2948	-	13954 W		086 99	01 11	198	1968	+-				. 750	1					-	-	
11	0 01	~	2745		LJJJT N	1 1	WA		WIND		1-	AIR TE		1-1,	4750	12	18	[4 4	50	616	1	- 1	0005
							CDLD#	TRANS, DI	SPEEC	- BAR		DRY	WET	CODE	NO, 085,		CIAL						
							CDDE	[m)	FORC	E (mb	s}	BULB	BULB		DEPTHS								
	_							1	9 520	06	1	21	20	7	14								
	J.	MESSENGR	CAST	CARD	DEPTH	im I	T ℃	5 %.	510	MA-T		IFIC VOLU		Δp	SOL	JND		PO 4-P	TOTAL-P	NO2-N	NO3-N	SID4-5	5.
	ŀ	TIME HR 1/10	T NO.	TYPE	OEF THE	1014	' "	,	310	MA-1	ANO	1X-TJAMC	107	YN. M. x 10 ³	VELO	CITY	D 2 m1/	µg - 01/1	μg - σ1/I	ו/to - פע	yg - e1/l	19 - al/	
																							1
	- 1		' '	ST			1961	3521	2.5	04	00	2924	5 0	000	15	213		1 1			ı		1
		198		085	000		1961	3521		04						213							
		198	3	OBS	000		1964	3521		04						215							
				510			1963	3521		04		2934		029		215							
				ST			1956 1947	3520 3518		05		2927		059		215							
		198	9	0B5	003		1947	3517		06	0(2923	0 0	088		214							
		171	J	ST			1920	3514		09	nn	2896	.1 (146		214							
		198	3	035	005		1920	3513		09	0.0	,20,0	, 1	140		209							
				510			1919	3513		09	0.0	2904	4 0	219		213							
		198	3	085	007	9	1918	3513		09				/		213							
				STI			1910	3511		10	0.0	2907	7 0	291	15	214							
		198	3	OBS	010		1906	3509.		10					15	213							
				510			1750	3483		28		2738		362		169							
		100	,	STI			1608	3461		45	0.0	2588	2 0	428		127							
		198	3	0B5 5T0	015		1608 1419	3460° 3435		45	0.0	2300	2 0	500		127							
		198	2	OBS	T020		1404	3433.		68	00	2390	2 0	553		073							
		170	,	510			1216	3419		95	0.0	2124	. q n	666		068							
		198	3	085	029		1084	3411		13		,		000		970							
				STI	030	0	1063	3411		17	0.0	1921	1 0	767		964							
		198	3	0B5	1038		0889	3405	3 26	42					14	914							
				STO			0850	3405		47		1637		945	14	901							
		1.0		STO			0635	3400		74	0.0	1379	1 1	096		834							
		198	3	085	1053		0574	3398		80						815							
				510			0519	3405		92		1207		225		804							
		198	2	510 0B5	070		0453	3416		09	0.0	1053	4 1	338		795							
		1)(510			0425	3427		20	0.0	0950	2 1	438		795 801							
		198	3	0B5	086		0423	3432		26	00	70770	۷ 1	-20		805							
		- / (STE			0398	3435		29	0.0	0867	8 1	529		807							
				510			0372	3442		38		0793		612		814							
				ST			0348	3447		44		0736	_	689		821							
				ST			0326	3450		48		10695		760		829							
		198	3	OBS	T125		0315	3450		50						833							

ID.	SHIP	LATITU	DE 1/10	LDNO	SITUDE 1/10	DRIFT	MARS SQU	ARE		ION TI	71	AR	CRUIS NO.		ITATE MUM	IDN	7	DEPTH TO DTTDM	MAX. DEPTH OF S'MPL'S			/E TIONS	TH	ER	CLD	230			STATIO	NC.
200	RT	3008		139	505W	H	122	1				968	-	_	_		4	755	04	22	+	5		1	6	_		ì	001	0.6
			- '					WAT	TER.	W	IND	BARC		A IR TE	MP.		+	ND.			' '	- 1	,					,		1
								COLOR	TRAINS. Im3	DIR.	SPEED OR FORCE	M ETE	R	ORY BULB	BU		2.	200	DBSERV	CIAL 'ATIONS										
										22	524	03	6 .	202	1	88 7		10												
	MESSENGR TIME MR 1/10	OF ND.	CARI		DEPTH :	(m)	1	°C	s	٠/	SIGMA	-1		IC VOLU		₹ △ DYN. x Io	M.	SDU VELC	JND	D2 m1/		04-P - 01/I	TOTAL pg·e		4D2-		ND3-N ug - at/1	SI O4-		рΗ
			51	TD	000	n		909	35	1 4	251	,	00	2849		000	0	15	198											
	0.30	0	0 B S		000			909		140	251		00.	204)		000			198											
			51		001			913	35		251		00	2862	7	002	9		201											
	030	0	089	5	001	2	1	914	35	138	251	L						15	201											
			51		002			913	35		251		00	2867	6	005			202											
			51		003			912	35		251		00	2869	1	008	6		203											
	0.30)	OBS	_	003			912		137	251								204											
		_	51		005			912	35		251		00	2877	2	014	3		207											
	0.30	0	OBS		005			912		135	251			200-			_		207											
	0.30	0	51 0B3		007			914 914	35	139	251 251		00	2887	8	021	5		211											
	0.50	U	51		010			914	35		251		0.0	2882	1	028	Ω		212 215											
	0.30	1	089		010			909		153	251		00	2002	. 1	020	0		215											
		~	51		012			796	34		252		0.0	2794	8	035	9		183											
			51		015			682	34		253			2699	-	042			151											
	0.30	0	085	5	015	2	1	673	34	660	2534								148											
			51	TD	020	0	1	485	34	41	255	7	00.	2482	6	055	7	15	095											
	030	0	0B5		T020			476		401	255								092											
			51		025			209	34		259		00	2104	6	067	1		009											
	0.30)	OBS		028			062		103	261								961											
			\$1		030			011	34		262		0.0	1862	2	077	1		945											
	0.30	0	OBS	5	1037	2	0	867	34	047	264	+						14	903											

											-		_				1	1						_			
REFER		SHIP	LATITU	D.	LON	GITUOE LE	MARS	DEN	STAT	ION TI	WE	YEAR		ORIGIN			DEPTH TD	DEPIN	OB	WAVE SERVATIO	NS	WEA-	CLOUD			NDDC	
ODE	ID.	CODE		1/10	CON	1/10 2	10°			DAY H	P 1/10	1000	CRU		TATIO		BOTTON	A S'MPL"		HGT PER		CODE	TYPE AM	-		NUMBER	
	1200	RT	3013		12	944 W	122		-	_		1968	\vdash	12 00			4755		28	5 4	36.11	V 7	-		-	7	
21	1200	l KI	2012	i N	13	744 W }	122	WAT	-		IND		1	AIR TE			_	10	20	2 4		XI	9 1	1	- 1	0007	
								CDLOR			SPEED	- BARG		DRY	WE	V15.	NO.	SPE DBSERV	CIAL								
								CDDE	[m]	DIR.	FORCE	1-6-		BULB	BUL		DEPTHS	DOSEKA	A HUNS								
										23	522	06	4	206	18	9 7	14										
		MESSENG	CAST	CA							Т		505/	OFIC VOLU	14.5	₹ △ C	, ,	UND		PD4~		OTA L-P	NO ₂ -N	NO3-N	SI D4-5		5
		TIME	of NO.	TY		DEPTH (m)	T	°C	5	٠/	SIGA	T-AN		OMALY-II		DYN. A X 10 ³	A. 1 3/51	DCITY	D ₂ ml/l	NO - 0		νg - e1/1	μg - αt/l	µg - a1/1	31 04-3 10 - 01/		C
		HR 1/10									+					^ ''	-			+	-						+
				١ ,	TD	0000	1	910	35	1 2	25	1.2	0.1	02857	2	0000	1 16	198		1	-	- 1			l	1	Ι,
		0.2	6	08		0000		910		132	25		0	02001	2	0000		198									
		02	O		Τ0	0010		910	35		25		0.1	02862	Q	0029		200									
		0.2	6	08		0010		910		129	25							200									
					TC	0020	1	910	35		25		01	02865	6	005		201									
				S	TD	0030	1	910	35	13	25	11	0	02869	1	0086	5 15	203									
		0.2		0.8		0030		910		130	25							203									
		0.2	6	08		0045		909		133	25							205									
		0.7			TO	0050		909	35		25		0	02871	6	0143		206									
		0.2	6	08	TD	0070 0075		911 912	35	137	25 25		0	0.7001	7	0215		210									
		0.2	6	08		0075		913		146	25		0	02881	1	0 2 1 :		214									
		0 2	0		TD	0100		864	35		25		Ω	02854	1	028		200									
					TD	0125		740	34		25			02758		035		165									
		0.2	6	08	5	0140	1	665	34	636	25	34						143									
				5	TD	0150	1	613	34	55	25	39	0	02640	6	0425	5 15	128									
		0.2	6	03		0190		413		280	25							068									
					TD	0200		355	34		25			02334		0549		050									
		2.2			TD	0250		120	34		26		0	01987	5	065		+977									
		02	6	08	S TD	0280 0300		024 008	34	10	26 26		0	01838	0	075		+947 +944									
		03	1	08		10364		935		092	26		U	01038	0	Urs.		928									
		0)	1		TO	0400		857	34		26		Ω	01641	1	092		1904									
		03	1	08		T0495		689		003	26			01041	*	0,2		854									
			•		TO	0500		684	34		26		Ω	01448	0	108		853									
		03	1	08		0570		595		987	26							+829									
					TD	0600		539	34		26		0	01269	1	121		811									
		0.3	1	0.8	35	T0627	0	495	34	029	26	93					14	798									
				S	TO	0700	0	470																			
				5	TD	0800	0	436																			
					TD	0900		402																			
		03	1	0.8	S	T0966	0	380																			

																				_					
REFERENCE	— SHIP			100000000	1.5	SOU	SOEN	STATION	TIME	WF A D		ORIGIN			OEPTH	OEPT		W.A	VE ATIONS	W.EA	CLOUE			NODC	
CODE NO	CODE	LATITU	1/10	LONGITUDE	0.7	10°	110	MO TOAY		YEAR		321U 40.	BMUP	N B	BOTTO	0.0			T PER SE	THER	TYPE AA			UMBER	
31120		3000		139583	-	-									. 20.						III/E AA				
1 21/12(J 4 1	1 3000	1 141	134303	w I	122	WA	01 14	198	-		AIR TE			4206	14	4 28	7 6	5	X1	8 1	1	- 1	0008	
							COLOR		SPEE	DAF	RO- TER	ORY	WE	- VIS	79 O82"	OBSCD	ECIAL VATIONS	5							
							CODE	Pw1	FDR		bsl	BULB	BUL	В	OEPTHS										
								2	5 \$2	4 1	49	189	17	2 7	14										
	WEZZENG		CAR	0			°C	5 -/**			SPE	CIFIC VOLU	ME	₹ A D	so.	UNO			PO4-P	TOTAL-P	NO2-N	NO3-N	\$104-51		
	HR 1/11		TYP	E DEPTI	4 (m)	'	C	3 "	216	SMA-T	Al	NDWALY-X	107	x 10 ³	\ AEF	OCITY	O ₂ ml.	" "	g = a1/1	μg - o1/l	ug - at/1	ו/ום - פע	μg = σ1/1	pH	1
																									7
	t	1	S.	TD 00	00	1	904	3513	, 2	513	0	02841	9	0000	15	196		1			1	1	t .		
	19	8	08		00		904	3513		513						196									
	19	8	QB:		09		906	3512		512					15	198									
					10		906	3513		512		02852		0021		198									
					20		906	3513		512		02855		005		200									
	19				30		906	3513 3513		512	0	02859	3	0086		202									
	1 7	0	OB:		50		907	3513		513 512	0	02866	. 2	014		202									
	19	18	08:				907	3513		512	U	02000	-	014.		205									
		0		TD 00			910	3514	_	512	0	02880	0	0219		5210									
	19	18	03:		79		910	3513		512	Ŭ	02000		0-1.		211									
					00		910	3514		512	0	02888	8	028		214									
	19	18	08:			1	910	3513		512						5214									
				TD 01		1	765	3484		525	0	02765	9	035		173									
			S	TD 01	5 U	1	633	3459	2	538	0	02655	6	0425	5 15	135									
	19	8	08				628	3458		538					15	133									
					00		430	3433		563	0	102427	2	0552		076									
	19	8	OB:				418	3431		564						072									
					50		032	3419		597		02108		0666		8008									
	19	I D	OB:		00		032	3409 3409		621 621	U	001880	16	076		+953 +953									
	19		08:				839	3403	_	648						+896									
		0			00		831	3404		649	Ω	01618	13	0940		894									
					00		685	3401		668	_	01439		1093	-	1854									
	19	8	0B		82		587	3399		680						+828									
			S	TD 06	00	0	568	3403		685	0	01283	8	1229		+824									
					00		478	3418		707	0	01070	9	134	7 14	805									
	19	8	083		60		438	3425	_	718					14	+800									
				TD 08			425	3430		723		00927		144		+802									
	3.0			TO 09			394	3438		732	0	00840	19	1536		+806									
	19	5	08:	S T09 T0 10			383	3440		735	^	00771	0	161		808									
				TD 11			340	3444		740 746		00771 00712		1616		+812 +818									
					00		318	3453		752		100112		1759		826									
					00		299	3455		755		00633		1824		+835									
				TO 14			283	3455		756		00621		188		+845									
	19	8	QB:				278	3455.		757	_					+848									
		_	00,	, , ,																					

	ENCE	SHIP	LATITU	OF 10	NGITUDE BELLEN	MARSO	IEN RE	STATI	ON THE		/EAR		ATOR*		DEPTH	MA)	H OS	WAVE SERVATIONS	WEA-	CLOUD			1000	
RY DE	NO.	CODE	÷	1/10	· 1/10 8 8	10°		MO TO			EAR		OITAT2 IBMUN		OTTOM	S'MPL		HGT PER SE	- COOK	TYPE AM	-		UMBER	
3 1 1	1200	RT	2822	2N 14	+0005W		-				968	N12 00	19	-	5029	15	36	3 4	x1	66			0009	
,-							WAT			INO	BARO	A ID TE	MP. °C	7	NO,	T		12171	1 71	1 0.0	1	1	00091	
						C	OLOR	TRANS.	DIR.	SPEED	WELE	R DRY	W E1		OBS. DEPTHS		ECIAL VATIONS							
						- 1	3005	Imi		FORCE	(mbs)		-											
									00	500	22	0 189	17	الصلت	14	L								_
		MESSENGR TIME	CAST NO.	CARD	OEPTH (m)	T	°C	S	٠/	SIGMA	A-T	SPECIFIC VOLI	IME 107	₹ ∆ D OYN. M.		DNU	02 ml/	PO4-P	TOTAL-P	NO ₂ -N	NO3-N	S1 O4-Si	ρH	5
		HR 1/10	1	TIPE								A 110 M A 21 - A		x 10 ³	VEL	OCITY		y0 - 01/1	ا/اه - وبر	ug - 01/1	yg - ot/l	µg = at/l		C
													- 1											
		10	_	STD	0000		30	352		249	-	003048	39	0000		233								
		19	8	OBS	0000		28	352 352		249		0000/	-	0/100		233								
		198	2	085	0010		28	352		249		003046) /	0030		234								
			_	STD	0020		29	352		249		003049) 4	0061		236								
		19	8	OBS	0029		29	352	-	249						237								
				STD	0030	20	29	352	29	249	2	003052	0	0091	15	237								
		19	3	085	0048		26	352		249						240								
		10		STD	0050		26	352		249		003053	3 1	0153		240								
		19	3	085 510	0072 0075		24	352		249		002046		0229		243								
		198	a	OBS	0075		16	352		249		003049	2	0229		243								
		17	3	SID	0100		98	352		249	_	003017	7.5	0305		240								
				STD	0125		93	350		251		002896	-	0379		213								
		19	3	OBS	0146		09	349		252			, ,	~,		191								
				SID	0150	17	98	349	91	252	3	002800) 5	0450	15	188								
				STD	0200		21	346		254		002607	19	0585	15	140								
		19	3	OBS	70206		95	346		254				_		132								
		1.0		STD	0250		14	343		258		002223	16	0706		046								
		19	3	OBS STD	0294		98	34]		261 261		001961	2	0810		976								
		198	9	085	T0398		50	340		264		001761	.)	0010		901								
		- /		STD	0400		46	340		264		001639	0	0990		900								
				STD	0500	06	65	340		267		001390		1142		846								
		19	3	OBS	T0586		53	340		268					14	815								
				STD	0600		44	340		269		001230		1273		814								
		1.0		STD	0700		84	341		270		001078	12	1388		808								
		191	3	OBS	0784		44	342		271		00005		1400		806								
				STD	0800 0900		. 3 9	342		271		000959		1490		807								
		191	9	085	T0978		84	344		272 273		000071	U	1582		811								
		170		STD	1000		78	344		273		000793	3	1665		817								
				STD	1100		51	344		274		000732	_	1741		823								
				STD	1200	03	27	345	52	275		000682		1812		830								
				STD	1300	03	05	345	55	275	4	000640	9	1878	14	838								
				STD	1400		86	345		275		000617	5	1941		846								
		19	3	OBS	T1492	0.2	70	345	64	275	9				14	855								

EFERENCE RY ID. DE NO.	SHIP	LATITUS	DE LO	NGITUDE 1/10	MARSDEN SOUARE	STATION TI	YEAR		ATOR'S TATION IUMBER	DEPTH DEPT TO OF BOTTOM S'MP	OBSER	AVE VATIONS	WEA- THER CODE	CLOUD		2.	NODC TATION UMBER	
11200	RT	2026		39583W				 		-								
31 200	1 21	2825	M 13	1 W C 9 C 6 C			97 1968			4572 1	5 31 4	4 2	X1	8 5			0010	
					WA		SPEED METE		VIS		PECIAL							
					COLOR	TRANS. OIR.	OR Imbs		WET COD	DEPTHS OBSER	RVATIONS							
						11	506 24	0 194	178 7	14								
				T			000 21	1 1/1								,		-
	MESSENGR TIME	CAST	CARD	DEPTH (m)	τ *c	5 %.	SIGMA-T	SPECIFIC VOLUM		SOUND	O 2 ml/l	PO4-F	TOTAL-P	NO2-N	NO3-N	SI O4-S1	pН	I,
	HR 1/10	T NO.	TYPE		ļ			ANOMALISA	X 10 ³	. AEFOCITA		1/1a - gu	µg + at/l	1/10 - gu	µg = 01/1	µg = at/1	-	1
																		T
	1	' '	STD	0000	2036	3531	2492	003040	9 000	15235	1 1	'				1	'	ľ
	197	7	085	0000	2036	35311	2492			15235								
	197	7	085	0009	2038	35313	2492			15237								
			STD	0010	2038	3531	2492	003048	2 003	15237								
			STD	0020	2036	3531	2492	003046	7 006	15238								
	19	7	035	0029	2035	35312	2493			15239								
			STD	0030	2035	3531	2493	003048	5 009	15239								
	19	7	OBS	0049	2034	35313	2493			15242								
			STO	0050	2034	3531	2493	003052	9 015	2 15242								
	197	7	OBS	0074	2038	35310	2492			15247								
			STO	0075	2038	3531	2492	003073	0 022	9 15247								
	197	7	035	0098	2031	35309	2493			15249								
			STD	0100	2022	3529	2494	003056	5 030	5 15247								
			STD	0125	1917	3510	2507	002940										
			STO	0150	1815	3493	2520	002824	0 045									
	19	7	OBS	0150	1815	34933	2520			15193								
			STD	0200	1627	3470	2547	002577	6 058									
	197	7	OBS	T0204	1610	34676	2549			15138								
			STD	0250	1317	3440	2591	002164										
			STD	0300	1078	3410	2613	001956	6 080									
	191	/	085	0301	1074	34091	2613			14968								
	10.		STD	0400	0852	3404	2646	001646	0 098									
	191	1	OBS	0400	0852	34043	2646	001307	c 11/	14902								
			STD	0500	0672	3405	2673	001394										
	197	7	STL	0600 800CT	0542	3406 34057	2690	001231	4 127									
	19		OBS STD	0700	0482	3419	2691 2708	001068	4 138	14811 3 14807								
	19	7	OBS	0798	0436	34299		001008	- 150									
	19	/					2721	000030	0 140	14806								
			STD	0800	0435	3430	2721	000939										
			STD	0900	0401	3437	2731	000856										
	10:	,	STD	1000	0370	3443	2739	000783	2 166	-								
	19	r	085	T1000	0370	34431	2739	000777	170	14813								
			STD	1100	0343	3448	2745	000723										
			STD	1200	0319	3452 3454	2751 2754	000672										
			STO	1400	0298	3456	2757											
	197	7	085	T1476	0281	34564	2759	000611	/ 193									
	19	7	002	11470	0271	34364	2/59			14853								

												_					MAX								
REFEREN	CE	SHIP			-5	MARS		TATZ	IDN T	IM E	YEAR	L	ORIGINA		_	DEPTH	DEPTH		WAVE ERVATIONS	WEA-	CLOUD			ATION	
	D.	CODE	LATITU		MGITUDE SOUTH		1			0.1710	ILAK			ATION UMBER		BOTTOM	S*MPL		HGT PEP! SEA	CODE	TYPE AM	1	N	UMBER	
-	0,	-		1/10	· '1/10 Z	10*	_	MO				+-			-	. = 0.0	+								
31 12	00	RT	2821	2N 13	39560W	086					1968	IN	112 011		, ,	4700	15	17	4 4	X5	8 5	1	1	0011	
							WAT	ER		VIND	BARE		AIR TEM		- VIS.	ND.		CIAL							
							COLOR	TRANS.	DIR.	SPEED	M ET E		BULB	WET	CODE	OBS. DEPTHS	DBSER	VATIONS							
							CDDE	im i		FORCE	`				+-	1.	-								
									17	520	17	6	21	20	7	14									_
		MESSENGE	- CAST	CARD		١.	for .	١.	.,	1		SPI	ECIFIC VOLUA	AE S	ΔD	SOL	DND	D2 ml/l	PO ₄ -P	TOTAL-P	ND2-N	NO3-N	S1 D4-S1	рН	3
		TIME 0	NO.	TYPE	DEPTH (m1	1	°C	,	*/	SIG	MA-T	A	NOMALY-X10	7 0	YN. M. X 10 ³	. AEFC	DCITY	D2 /mi/1	μg - 01/1	1/10 - gu	μg → α1/l	yg - 01/1	μg = 01/l	pri	c
		HR 1/10				-				-		-		-		1									
			1		0000	1	023	35	20	1 20	95	١ ,	003016	, 1	000	1.5	231		1 1)	,	1	1
		197		STD OBS	0000		023		299		95	-	103010	,	.000		231								
		197		085	0000		027		301		94						234								
		131		510	0010		027	35			94	0	003028	7 (030		234								
				STO	0010		026	35			94		003029		1061		235								
				STD	0030		025	35			95		003029		091		237								
		197	7	OBS	0033		025		304		95		, , , , , , , , , , , , , , , , , , , ,				237								
		131		STO	0050		024	35			95	(003036	7 (151		240								
		197	7	035	0051		024		300		95						240								
		101		STO	0075		025	35			95	(003045	5 0	228		244								
		197	7	OBS	0079		025		303		95						245								
				STD	0100		016	35	30	24	97	(003034	0 0	303	1.5	246								
		197	7	085	0101	2	015	35	298	24	97					15	245								
				STD	0125	1	939	35	16	2.5	06	(002951	4 (378		227								
				STD	0150	1	854	35	01	25	16	(002861	3 ()451		205								
		197	7	OBS	0151	1	.85v	35	U07	25	17						204								
				STD	0200		667	34			642	(002630	7 (588		155								
		197	7	085	10202		658		736		43						153								
				STD	0250]	358	34	36		80		002273		711		061								
				STD	0300		.122		12		507	(002017	0 (818		985								
		197		088	0301		118		113		507						984								
		197	7	OBS	10397		888		052		542			_			915								
				STD	0400		0880		05		643		001682		1003		913								
				STD	0500)662		06		575	(001377	1	1156		845								
		19	7	088	T0584)536	-	057		591			,			808								
				STD	0600		1528		07		593		001203		1285		808								
				STD	0700)484		18		707		001078	۷ .	1375		808								
		19	7	OBS	0786)448		256		717	,	000070		1502		+808								
				STD	0800)442		27		718		000970												
		101	_	STO	0900		1405	_	36		729		000868	1	1594		+811 +813								
		19	1	085	T0974		380	_	410		736 737		000795	1	1677		+814								
				STO	1000)343		45		743		000746		1754		819								
				STD	1100				48		747		000746		1826		825								
				STD	1200 1300)318)298		51		752		000662		1895		834								
				STO	1400		281		54		756		000627		1959		4844								
		19	7	OBS	T1466		273		559		758		000027		. / .		852								
		17	1	000	11400	-	C 1 "	74	200	~	, 20					-	. 0 2 5								

FERENCE RY IC		SHI5 COOE	LATITU		ONGITUDE	2007	MARSDEN SOUARE	STATION TI	YEAR	UN		TATION UMBER		TO	MAX. DEPTH OF S'MPL'S	ORS	WAVE ERVATIONS	0000	CODES		2	NOOC TATION TUMBER
- 11	-			1/10	1710			MO OAY H		-									11111 A.M			
3 1 1 2	00	RT	2817	N 1	4002 W	1		- 1	198 196	8 1	112 012		4	755	17	16	4 4	×1	3 6		1	0012
							WAT			RO.	AIR TEM		VIS.	NO.	SPECI	AL						
							COLOR	TRANS OIR,		ETER 16s)	ORY	BULB	CODE	OBS. DEPTHS	BSERVA	TIONS						
									10101					1.								
								19	S21 1	73	222	217	8	14			,					
		MESSENGR	CAST	CARO	OEPTH (m	.	τ °c	5 %.	SIGMA-T	5.9	ECIFIC VOLUA	AE S	∆ 0, N. M.	SOUN	10	0 g m1/L	PO 4~P	TOTAL-P	NO2-N	NO3-N	5104-51	
	- 1	TIME 6	NO.	TYPE	OEFIH IM	١	, ,	,	310/11/2-1	_ A	NOMALY-X10	, ,	103	VELOC	TTY	23 111171	1/10 · gu	yg + at/l	μg - σ1/I	ug - at/1	µg = 01/1	pН
	}	17.10				\rightarrow		1		+												
	1			STD	0000	- 1	2024	3529	2494	١,	0030228	9 0	000	152	21		1		l			
		196		085	0000		2024	35294	2494		0030220	5 0	000	152								
		176	,	STD			2026	3530	2494	(0030295	5 0	030	152								
		196	,	085	0013		2026	35295	2494		.00027.	. 0		152								
		_ / (STO			2026	3529	2494	(003035	1 0	061	152								
				STO			2026	3529	2494		003038		091	152								
		196		085	0036		2026	35293	2494	,				152								
		2,0		SID			2024	3530	2494		003039	0	152	152								
		196	,	085	0059		2022	35296	2495					152								
				STO			2028	3532	2495	(003041	0 0	228	152								
		196	,	085	0090		2032	35330	2495					152								
				STO			2032	3533	2495	(003051	1 0	304	152								
		196	,	085	0118		2033	35341	2495			_		152								
				STO			2005	3528	2498	(003029	5 0	380	152								
				STO			1903	3509	2510		002922.	2 0	454	152								
		196	,	085	0176		1790	34898	2524					151	90							
				STO			1677	3474	2539	(002660	5 0	594	151								
		196		085	T0235		1510	34532	2561					151	10							
				STO	0250		1419	3445	2574	(002330	9 0	719	150	82							
				STD	0300		1155	3422	2609	(0020021	9 0	827	149	98							
		196		085	0348		0962	34072	2631					149	35							
				STD	0400		0850	3403	2646	(001652	5 1	010	149	01							
		196	5	085	T0457		0742	34013	2660					148	69							
				STD			0675	3403	2671	(001413	4 1	163	148								
				STO			0547	3410	2693		001205		294	148								
		195	5	OBS	T0673		0480	34155	2705					148								
				STO	0700		0470	3419	2709	(001053	8 1	407	148	02							
				STC	0800		0434	3430	2722	(000938	6 1	507	148	05							
		196	5	085	0875		0409	34369	2730					148								
				STO	0900		0402	3438	2731		000850		596	148								
				STD	1000		0373	3444	2739	(000780	0 1	677	148	15							
		196	5	085	T1089		0350	34475	2744					148								
				STO	1100		0347	3448	2745	(000727	7 1	753	148	21							
				STO	1200		0323	3452	2750		000677.		в23	148								
				STO	1300		0302	3455	2755	(000637		889	148	36							
				3 T 0			0283	3457	2758		000606		951	148								
				STO	1500		0266	3458	2760	(000585	2 2	011	148	55							
		196		085	T1664		0243	34589	2763					148	73							

REFERE		SHIP	LATITU	105	100	GITUOE #	MARS		STAT	ON TI		YEAR		ORIGIN				DEPTH	MAX. DEPTH	08		VE ATIONS	W E		DUO			NOOC
CODE	10. NO.	COOE	LATHU	1/10	LON	GITUOE	10"		40 C			1CM8	CRUI		STATIC NUM8		В	MOTTO	OF S'MPL'S			PER S		e !	AMT			NUMBE
	200	RT	3018		140	002 W	123					1968	N1	2 01	3		4	480	15	20	1		X		6			001
- 111	200	1 1	2010			006 41	1 1.	WAT			/INO	BARG		AIR TE			1	NO.			1	(7)	1 ^	1 2	0	1	1	001
								COLOR		OIR.	SPEED	METE	A	DRY	WE	T C	IS.	200	OBSERV									
								COOE	(m)		FORCE	(mbs	_	SULB	BUL		\rightarrow	JEFINS:			-							
										18	518	18	6	200	19	4	7	14			L., .			,				
		MESSENGE		CA		OEPTH (m)	T	°C	s	٠/	SIGN	A-T		FIC VOLU		₹ ∆ OYN.	D M	sou		02 ml/		PO4-P	TOTAL-			но₃-н	5104-5	
		HR 1/10	NO.	TY.	PE	06/1// 0///		0			3,07		ANO	MALY-E	107	X 1	03	VELO	CITY	0 2 *****		g = 01/l	na - at	u pg =	01/1	yg - 01/1	μg = α1/	
		1		' s	TD	0000	1	899	35	11	25	13	00	2846	5	000	0.0	15]	195				,					
		20		08		0000		899		110	25	13							195									
		20	0	OB		0008		901		112	25								196									
					TD	0010		901	35		25			2852		002		151	-									
					TD	0020		901	35		25			2853		00		151										
		20	^		TD	0030		900	35		25		UC	12853	4	001	86		200									
		20		08	_	0030		900		118	25							-	200									
		20	U	08	ID	0048		899 899	35	118	25 25		0.0	2856	6	014	. 2	152	203									
					TO	0075		898	35		25			2854		02			207									
		20	n	08		0075		898		131	25		CIC	12074		U£.	1 ↔		207									
		20		08		0097		900		144	25							152										
		20	0		TD	0100		895	35		25		0.0	2856	6	028	85		210									
					TC	0125		835	34		25			2829		03			195									
		20	0	08	S	0146		753		833	25								173									
				S	TD	0150	1	725	34	79	25	31	0.0	2717	8 8	04	26	15	165									
		20	0	0.8		T0197		437	34	370	25	64							078									
					TD	0200		424	34		25			12393		05		150										
					TD	0250		224	34.		25		00	2125	2	066	67		014									
		20	0	OB		0294		074		113	26								967									
		20	0		TD	0300		057	34		26		00	1910	7	0.74	67		962									
		20	U	OB		T0491		829		031	26		0.5	150		0.0			892									
					TD	0400		813	341		26			1596		094			887									
		211	0		TD	0500		654 557	34		26		00	1390	16	100	92		842									
		21)	0	OB	10	T0581 0600		543	341	015	26		0.0	1244	. 6	12	2 /4		816 814									
					TD	0700		480	34		27			1088		134			806									
		20	Ω	08		0779		440		240	27		00	1000		10.	+ 1		803									
		20			TD	0800		433	34		27		0.0	0967	1	144	43		804									
					TD	0900		400	34		27			0870		15			808									
		20	0	08		T0978		377		412	27								812									
		20		08	_	T1510		268		564	27								857									

EFER RY IDE	IO.	SHIP	LATITU		NGITUOE JOURN	MARSO	RE	10	ON THE	1	YEAR	CRUISE S	ATOR'S STATION SUMBER		DEPTH TO BOTTON	MAX. OEPTH OF S'MPL'	OB	WAVE SERVATIONS	2000	CLOUG		\$1	NODC TATION UMBER
-				1/10	1/10			MOO				-		-		3 MFL	1	1-1-	· A		1		
3 1	1200	RT	3010	8N 14	4003 W	123					968	N12 01			4755	15	21	4 2	X1	6 7	1	-	0014
						<u> </u>	WAT		W	IND	BARO			vis,	NO.	SPE	CIAL						
							OLOR	TRANS.	DIR.	SPEED	(mbs)		W ET BULB	CODE	OBS.	OBCCOL	ATIONS						
						F	.001		10	FORCE				-		1							
									18	513	240	200	194	7	14	<u> </u>							
		MESSENGR		CARO	OEPTH (m)	T 1	ب		٠/	SIGM.		SPECIFIC VOLU	ME S	A D	50	QNU	O2 ml/	PO4-P	TOTAL-P	NO2-N	NO3-N	S1 O4-S1	pН
		TIME HR 1/10		TYPE	Ott. H (m)	' '		,	***	210 m.	^-'	ANOMALY-XI	107	x 103	, AET	OCITY	02 1117	μg - el/l	μg - a1/1	μg - a1/1	μg = a1/}	yg - ot/1	971
					†																		
			1	STO	0000	19	0.4	351	14	251	3	002839	io	000	1 15	196		1	1	l		1	1
		19	7	OBS	0000	19		351		251		002037				196							
		19		OBS	0009	19		351		251						198							
				STO	0010	19		351		251		002843	5 0	028		199							
				STD	0020	19	05	351	14	251		002842	3 0	057	15	200							
				STD	0030	19	0.3	351	.5	251		002842	1 0	085		201							
		19	7	085	0033	19	03	351	146	251	4				15	202							
				STD	0050	19	03	351	15	251	. 4	002847	3 0	142	15	204							
		19	7	085	0050	19	03	351	146	251	. 4				15	204							
				STO	0075	19	03	351	L 4	251	4	002860	13 0	1214	15	208							
		19	7	085	0077	19	03	351	137	251	4				15	209							
				STD	0100	19	01	351	L 4	251	.5	002862	5 0	285	1.5	212							
		19	7	085	0100	19	01	351	142	251	5				15	212							
				STO	0125	18	20	349	96	252	21	002808	0 0	356	1.5	191							
				STO	0150		20	347		253		002720	18 0	425		163							
		19	7	085	0150	17		347		253				_		163							
				SID	0200	14		343		255		002461	8 0	1555		086							
		19	7	OBS	T0201		56	343		256						085							
				STD	0250	12		342		259		002138		670		016							
		1.0	_	STD	0300		47	341		261		001898	8 (771		958							
		19		085	0300		47	34]		261						958							
		19	1	085	T0398		19	340		265		00160	12 0	944		889							
				STD	0400		15	34(265		001602		946 .094		888							
		1.0	-	510	0500		38			267		001366	1 1	.094		895							
		19	1	OBS	T0589	05 05		340		268		001217	0 1	223		805							
				STD	0600					269				.223 .338									
		10	7	STO	0700 0783		73 39	341		270		001072		. 238		803							
		19	1	OBS	0800		33	342		271		000959	7 1	439		804							
				STD	0900		.02	34:		272		000939		531		809							
		19	7	OBS	10978		80		408	273		000012		. 231		814							
		17		STD	1000		74	344		273		000800	14 1	614		815							
				STO	1100		48	346		274		000755		692		821							
				STD	1200		24	344		274		000713		766		828							
				STD	1300		03	345		275		000673		835		836							
				510	1400		85	345		275		000637		901		846							
		19	7	OBS	T1491		70		558	275						855							
		- /		000	, , .				0						_								

REFERENCE			MARSDEN	STATION TIM	NE	ORIGIN	ATOR'S	DEPTH	MAX. DEPTH		WAVE	WEA-	crono		, N	ODC
CTRY IO. COOE LATE		GITUDE NOCIE	SOUARE	(GMT)	YEAR	CRUISE S	TATION	BOTTOM	OF S'MPL'S	DIF	HGT PER SEA	THER	TYPE AM	1	21 21	ATION JMBER
	1/10	17101		MO DAY HR	96 1968	 		4114	40	30	4 2	XI	6 7			0015
31 1200 RT 295	8 N 14	005 W	WA.			A 10 TEA		NO.	-		14/61	1 71	1 017	'	1	0017
			COLOR		SPEED MARY	ER DRY		OBS. DEPTHS	OBSERV	ATIONS						
			CODE	(m) OIK,	FORCE (mb	s) BULB										
				13	505 19	200	189 7	20								
MESSENGR CAS	CARD		7 %	s */	SIGMA-T	SPECIFIC VOLU	ME SA	so	UND	O 2 m1/1		TOTA L-P	NO2-N	NO3-N	51 O ₄ -5	pH C
TIME OF NO.	TYPE	DEPTH Imi	, ,	3 '44	310 W W == 1	ANOMALTX1	x 10 ³	VEL.	OCITY		μg - α1/I	µg = ot/l	ид - ot/l	yg - a1/1	µg + a1/1	С
	STD	0000	1900	3513	2514	002832	9 000	-	195							
196	085	0000	1900	35132	2514	000010	5 000		195							
	STD	0010	1902	3513	2514	002840	5 002		197							
196	OBS STU	0010	1902 1899	35133 3513	2514 2514	002835	9 005		198							
	STD	0020	1898	3514	2515	002836			199							
196	OBS	0030	1898	35135	2515			15	199							
196	OBS	0049	1900	35135	2514				203							
	STD	0050	1900	3514	2514	002848	0 014		203							
196	OBS	0074	1899 1899	35139 3514	2515 2515	002850	5 041		207							
196	STD OBS	0075 0098	1899	35142	2515	002000	9 021		211							
170	STD	0100	1885	3511	2516	002846	8 028		207							
	STD	0125	1729	3479	2530	002719	0 035	4 15	162							
196	OBS	0149	1601	34553	2542				124							
	STD	0150	1597	3455	2543	002605			123							
	STD	0200	1406	3429	2565	002407	6 054		068							
196	OBS	T0201 0250	1402 1189	34286 3418	2565 2599	002082	4 065		001							
196	STD OBS	0299	1024	34100	2623	JOLOGE	, 0-2		950							
170	STD	0300	1022	3410	2623	001858	6 075		949							
196	OBS	0397	0842	34041	2648				898							
	STD	0400	0835	3404	2649	001621			896							
	STD	0500	0648	3404	2675	001369	2 108		839							
196	OBS	T0598	0520	34038 3404	2691 2691	001214	5 120		+804 +804							
	STD	0600 0700	0519 0470	3417	2707	001214			802							
196	085	0796	0431	34268	2719	001000	,0 1-1		+803							
170	STD	0800	0430	3427	2720	000956	1 142	5 14	4803							
	STD	0900	0402	3435	2729	000872	5 151		+809							
196	085	0999	0377	34418	2737				4816							
	STD	1000	0377	3442	2737	000799		_	4816 4823							
	STD	1100 1200	0353	3445 3448	2742 2746	000756			4831							
	STD	1300	0310	3451	2751	000676			4839							
	STD	1400	0291	3453	2754	000645			4848							
196	OBS	T1498	0273	34555	2758			14	4857							
	STD	1500	0273	3456	2758	000608			4858							
	STD	1750	0233	3459	2764	000551	18 209		4883							
216	OBS	T1912	0212	34610 3462	2767 2769	000506	0 242		4902 4913							
214	STD 08s	2000 T2416	0174	34646	2773	000000	,0 242		4972							
216	STD	2500	0174	3465	2774	000461	13 246		4985							
216	OBS	2933	0158	34664	2776				5054							
	SID	3000	0157	3467	2776	000443	37 269		5065							
216	085	3425	0152	34675	2777				5137							
216	OBS	T3865	0149	34684	2778				5213 5231							
216	OBS	T3964	0149	34680	2778			1	1621							

ID.	SHIP	LATITUDE		NGITUDE JUDICIE		ARE	STATION	TI	YEAR	Sur PC LI	IISE !	ATDR'S		DEPTH TO SOTTOM	DEPTH DF	H 085	WAVE ERVATIONS	WEA- THER CODE	CLOUD		2.	NODC TATION UMBER
		1/1	_	17.10	10°	1"		HR.1/	10	N	0. 1	UMBER			S'MPL	"S DIR	HGT PER SE	A	TYPE AM	-		
1200	RT	29598N	13	1957 W	086	99	01 22	194	4 196	8 N	12 01	6	4	+572	15	12	3 3	X1	6 6			0016
						WAT	ER	WINE	B.A	RD-	AIR TE	MP. °C	T T	NO.	£ 0.1	ECIAL						
							TRANS. DI	R. 5P	EED ME	TER	DRY	WET	CODE	DBS. DEPTHS		VATIONS						
						CODE	(m)		ISCE (IT	bs)	BULB	BULB		DEFINS								
							1	3 S.	12 2	54	189	161	8	14								
	MESSENGR	CAST C										5	Δρ	1	UND						5.0.5	
	TIME 0		ARD	DEPTH (m)	T	°C	s °/.	. :	SIGMA-T		DMALY-X	7 D	YN. M. X 10 ³		DCITY	02 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N ug - oi/I	\$1 O4-\$1 yg - 61/\$	pН
	HR 1/10				+					-		-	X 10°	-			-			79		
							ŀ	- 1		1							1					
			STD	0000		879	3506		2514	01	02832	2 0	000	15	188							
	194		BS	0000		.879	3506		2514						188							
			STD	0010		.883	3507		2513	01	02842	4 0	028		191							
	194		BS	0010		883	3506		2513						191							
			STO	0020		.880	3507		2514	0	02840	0 0	057		192							
	194		BS	0029		879	3506		2514						193							
	10.		STD	0030		.879	3506		2514	01	02843	0 0	085		193							
	194		BS	0048		.882	3506		2514			_	1		197							
	104		STD	0050		.882	3507		2514	01	02852	2 0	142		198							
	194		BS	0072		.886	3508		2514		0000		2		202							
	10.		STD	0075		892	3510		2514	0	02862	5 0	214		205							
	194		BS	0097		896	3512		2514		0 0 0 / 0	2 0			210							
			STD	0100		.880	3509		2516		02849		485		205							
			STD	0125		.753	3483		2528	0	02745	3 0	355		170							
	194		BS	0146		657	3465		2537						142							
			STD	0150		643	3463		2538	0.	02648	8 0	422		138							
	194		BS	T0198		462	3437		2559						086							
			STD	0200		451	3436		2560		02448		550		083							
	10.		STD	0250		.215	3419		2595	0	02123	1 0	664		011							
	194		BS	0291		.065	3409		2615				7		963							
	1.04		STD	0300		045	3409		2618	01	01904	9 0	765		958							
	194		BS STO	T0383		872	3404		2644	0	01612	2 0	O A 1		907							
									2650		01613		941		894							
	194		STD	0500		628	3403 3402		2678	Ü	01346	8 1	089		831							
	194	-	SID	T0573		510	3402		2690	0	01181	1 1	215		802							
			STD	0700		1460	3419		2695 2710		01181 01041		215 326		801 798							
	194		85 85	0769		1432	3419		2710	U	01041	1 1	220		799							
	194		SID	0800		1423	3429		2722	0	00933	0 1	425		801							
			STD	0900		1395	3437		2731	-	00933 00849	-	514		807							
	194		BS	0967		378	3441		2736	01	00049	7	214		811							
	194	_	SID	1000		370	3443		2739	0.1	00783	0 1	596		813							
			STO	1100		1346	3448		2745		00783 00726		671		821							
			STD	1200		1324	3452		2750		00126		741		821							
			STD	1300		304	3454		2754		00647		808		837							
			STD	1400		1287	3455		2756		00626		871		847							
	194		BS	T1459		277	3455			0	00020	1 1	011									
	194	U	0.5	11409	U	211	2422	۷ .	2757					14	852							

REFERENCE	SHIP				- E	MAR	SDEN	STAT	ION T	IAA E				ORIGIN	ATOR	S		DEPTH	MAX. DEPTH		WAV	E	WEA-	CLDUD			NODC	
CTRY ID.	CODE	LATITU		LDNGITUDE	NON	200			GMT)		YE.	AR	CRUISE NO.		TATIO		٦,	TQ BOTTOM	OF.		SERVAT		THER	CODES)		UMBER	
	-		1/10	1/10		10°	1.	WD I	_		_				NUM8	ER_	-		S'MPL'S	Dik,	_	ER SEA	-	TYPE A.M	T			-
31 1200	RT	3003	N 1	14000 W		123	00	01	23	195	19	68	N12	01	7			4115	16	26	5 4	2	X1	6 3			0017	
							WA	TER	٧	MIND		BARO		AIR TE	MP, *C		VIS.	NO.	SPEC	CIAL								
							COLOR	TRANS.	OIR.	SPEEC	- 1 '	METE		DRY	WE WE	ĭ c	ODE	OBS. DEPTHS	OBSERV									
							CODE	uni		FORC	-	(mbs	_	ULB	-	-	-											
								L	07	512	2	24	7 1	9	16		7	14										
	MESSENGR	CAST	CARD	DEPTH			°C		٠/			_	SPECIFIC	VOLU	ME	₹ Z	0 4	sou	IND		PO	4-P 1	OTAL-P	NO ₂ -N	NO3-N	SID4-S		S
	HR 1/10	NO.	TYPE	DEFIR	(m)	. '		,	***	310	MA-	- '	ANON	ALY-X1	07	X	103	VELC	CITY	02 ml/	νg -	01/1	µg - 01/1	µ9 - a1/1	νg - σ1/l	yg = 01/	pН	2
	1111 1710					_									_													
	1	1 1	STO	000	0	1	898	35	15	2 5	516	- 1	002	812	1	00	0.0	15	195		-	- 1	,		I	I	ı	11
	195	5	OBS	000			898		154		516		002	012	1	00	00		195									
	199		OBS	000			900		154		516								197									
			STO				900	35			516		002	820	4	00	28		197									
			ST				900	35			516			822		00			198									
			STO	003	0	1	899	35	15	25	516		002	825	8	00	85	15.	200									
	195	5	OBS	003	2	1	899	35	153	2 5	516							15.	200									
			ST	005	0	1	900	35	16	2 5	516		002	833	2	01	41	15	204									
	19	5	OBS	005			900	35	155	2 :	516							15	204									
			ST	007	5	1	901	35	16	2 !	516		002	842	1	02	12	15	208									
	19	5	OBS	007			901		158		516								208									
			ST				885	35			517		002	839	6	02	83		207									
	19	5	OBS	010			882		112		517								206									
			STO				707	34			532			697			52		155									
		_	STO				553	34			547		002	561	. 3	04	18		109									
	19	5	OBS	015			542	-	458		548					0.5			105									
	101	-	STI				336	34			574		002	319	14	00	40		044									
	19)	085	020			324		213		575		00-		=	0.4			040									
			STI				146	34 34			605 627			816 816			49 45		986 940									
	19	_	OBS	030			985		10 097		52 1 529		001	010	1 (0 1	40		937									
	19:)	511				835	34			027 549		001	625	. 1	00	17		896									
	19	5	OBS	040			324		031		550		001	.023	1	0,	1 (892									
	1.7	_	STI				645	34			577		0.01	354	8	10	66		838									
			STI				508	34			596			172			92		800									
	19	5	OBS	T061			498		J81		597								797									
			ST				459	34			710		001	040	15	13	03		798									
			ST	080	0	0	423	34	29		722		000	1933	0	14	02	14	801									
	19!	5	OBS	082	1	0	416	34	310	2	724							14	801									
			ST	090	0	0	399	34	37	2	731		000	854	2	14	91	14	808									
			ST	0 100	0	0	377	34	43	2	738	3	000	792	2	15	73	14	816									
	19	5	OBS	103	4	0	370	34	445	2	740)						14	819									
			ST	0 110	0	0	356	34	48	2	744		000	738	13	16	50	14	825									
			ST	0 120	0	C	335	34	52	2	749	}	000	691	4	17	21	14	833									
			ST	D 130	U	C	315	34	55	2	753	}	000	652	7	17	88	14	842									
			ST				294		57		757			619			52		850									
			STI				274		57		759		000	602	0	19	13		85B									
	19	5	OBS	T157	2	C	1260	34	574	2	760)						14	864									

	TNCT -							-,-				-	M	AVI						
EFER	ENCE	SHIP	LATITU	IDE LO	NGITUOE SOUTION	MARSOEN SOUARE	STATION TG MT	TIME	YEAR .	ORIGIN CRUISE S			TO DEF	TH OF	WAVE	WEA-	CLOUD		5	NODC
DE	NO.	CODE	•	1/10	1/10	30° 1°	MO DAY				TATION		TOM S'M	17	HGT PER SE	0000	TYPE AN			UMBER
31	1200	RT	3002		.0015w	123 00	01 24		1968	N12 01	8	4.3		5 08		X 2	6 8			0010
J 11.	. 2 00	1 10 1	2002	. 14 1-4	.0013#			WINO		A IP TE		-		2 00	12121	12	100	1	1	0018
						coro		SPEED	- BARO-	•		VIS. C	IND. MAC	SPECIAL ERVATIONS						
		`				COOL		FORCE	(mbs)		BULB	OE	PTHS OBS	CKAWIIOU7						
							0.9	516	224	183	156	7	4							
		MESSENGI					1	-			. 5 /	n			1				T	
		TIME	97 NO.	CARD	DEPTH (m)	T °C	s */	SIGM	T-AA	ANOMALY-11	n7 UTN	. M.	VELOCITY	02 ml/	PO4-P pg - 01/1	TOTAL-9 yg - ot/l		NO3-N pg - o1/l	\$1 04-\$1 yg = at/f	рΗ
		HR 1/10	-								, X	103			-			7.		
				1		1000	2534	2.5	, ,				25200							
		3.0	,	STD	0000	1898	3514	25		002820	1 00	00	15195							
		19		0B5	0000	1898	35143						15195							
		19	D	OBS	0009	1901	35150			000000	5 (0.1)	20	15197							
				STD	0010	1901	3515	25		002825		28	15197							
				STD	0020	1900		25		002825			15198							
				STD	0030	1898		25		002826	1 00	85	15200							
		19	6	OBS	0032	1898							15230							
				510	0050	1899		25		002840	5 01	41	1520.							
		19	6	085	0050	1899							15203							
				STD	0075	1900	3514	25		002852	7 02	13	1520							
		19		OBS	0078	1900							15208							
		19	6	OBS	0099	1893							15209							
				STD	0100	1888		25		002854			15208							
				STO	0125	1764		25.		002756	3 03	54	1517							
		19	6	OBS	0148	1657							15143							
				STD	0150	1648		25		002652	6 04	22	15140							
		19	6	OBS	T0199	1445	34364	_			_		1508]							
				STD	0200	1440		25		002425		49	15080							
		10	,	STD	0250	1232	3420	25		002147	4 05	63	15016							
		19	D	OBS	0294	1083							14970							
		1.0		STO	0300	1068		26		001937	0 07	65	14965							
		19	0	0B5	T0384	0880	34054 3405			001/00	1 00	, 3	14910							
				STO	0400	0845		26		001630		43	14900							
		1.0	۷.	STD	0500 T0572	0659 0559		26		001395	9 10	95	14844							
		19	0	085						001226	7 70	26	14815							
				SID	0600 0700	0536		26		001235		26 41	14811							
		1.0	c	STD		0467		27:		001065	0 13	41	1480							
		19	0	OBS	0768 0800	0431	34247 3428			000030	0 14	41	14798							
				STD		0421		27		000938			14800							
		1.0	,	STD	0900	0393		27		000847	1 13	31	14806							
		19	0	OBS	T0953	0379				000707			14809							
				STD	1000	0367	3442	27		000787		12	1481							
				STD	1100	0343		27		000745		89	14819							
				STD	1200	0321	3448	27		000705		62	1482							
				STD	1300	0301	3451	27		000666		30	14835							
				STO	1400	0283		27		000630	2 18	95	1484							
		19	6	OBS	T1490	0269	34565	27	59				14854	+						

REFERENCE	SHIP			E 5	MAR			ION T				D	RIGINA	ATOR"			DEPTH	MAX, DEPTH			A VE	WEA				NDDC	
CTRY ID.	CODE	LATITU		LONGITUDE 1/10				GMTI		YE.A	A.R	CRUISE NO.		TATID		٦,	TO MOTTOM	DF			ATIONS	CDDI				TATION	
-	0.7	2002	1/10		10°	1	_		1R,1/10						*	+	-	S'MPL'S	DIR.	HG	T PER SI	EA	TIPE AN			40,000	
31 1200	RT	3003	N	14000 w	123				195	19	68	N12	01			1,4	4389	15	06] 3	4	XT	6 7	1		0019	
						WAT		<u> </u>	WIND SPEED		BARO			AP. °C	- v	15.	NO. 085.	SPEC									
						COLOR	TRANS.	DIR.	FORC	- 1 "	METER (mbs)		L9	BULE		DE	DEPTHS	OBSERV.	ATIONS								
								06	508	\rightarrow	213	3 18	33	16	1 7	,	14										
	MESSENGA								_		T				E A					1						1	-
	TIME	OF ND.	CARO	OEPTH (m)	T	*C	S	*/	SIG	MA-	-1	SPECIFIC ANOMA		M E	≨ ∆ SYN.	Μ.	VELD		02 ml/		PD4=P	107AL-F		ND3-N	SI D4-5		S C
	HR 1/10			_	+		-				+				X 10			-		- 1		78 0	79 001	py - diri	pg - 017		-
			ST	0 0000	1	002	25	1 2	1			000	2 2 ()	_			1 25						1				
	195	5	0B5			893 893	35			16		002	314	כ	000	U		193 193									
	• 7.		ST			892	35			517		0028	304	6	0 U 2	8		195									
	19	5	OBS	0010		892		149		517		002	, , ,	0	002	. 0		195									
			ST			893	35			17		0028	309	3	005	6	151										
	19	5	OBS	0029	1	893	35		2.5	17						-	15]	198									
			ST	D 0030	1	893	35	15	2.5	17		0021	313	9	3 U S	4	151	196									
	195	5	OBS	0049		892	35	148		17							152	201									
			ST			892	35			17		0021	319	1	014	1	152										
	19	5	OBS	0073		892	35			17							152										
	1.0	_	ST			892	35			17		0021	328	7	021	1	152										
	195	>	OBS	0098		893 884	351			17		000		_	. 7	2	152										
			ST			775	348			18		0028			028 035		152 151										
	195	5	OBS	0149		668	346			37		002	122	4	,,,	2	151										
			ST			663	346			38		0026	491	8	041	9	151										
			ST	0 0200	1	437	343	36		63		0024)54		150										
	195	5	OBS	0202	1	428	343	350	25	65							150	276									
			ST	D 0250	1	203	342	24	26	01		0020	67	9 1	05	8	150	07									
			ST			023	341			24		0018	349	2 1	75	6	149	950									
	199	5	OBS	0302		017	341			25							149										
		_	ST			829	340			48		0016	278	8	093	0	148										
	19!	5	085	T0403		824	340			48							148										
			ST			631	340			76		0013			107		148										
	199		STI			497	340			96		001	1668	8	120	6	147										
	19:	9	OBS ST	T0600 D 0700		497 457	340			96		0010	130	7	1 2 1	e	147										
	19.		0BS	0798		423	342			,53		0010	150	1	131	0	147										
	1) .		ST			422	343			23		0009	2240	4	141	3	148										
			ST			396	343			31		0000			150		148										
	195	5	085	T0993		373	344			38		5000				-	148										
	195	5	OBS	T1503		267	345			59							148										

EFERE	NCE	SHIP				E E	MARSDE		STATIO	ON TIA		I		ATOR"		DEPTH	M AX OEPT		WAV	E	WEA- THER	CLOUD			NODC
RT DE	ID. NO.	CODE	LATITU	DE 1	ONGITUDE 1/10	DRIST	SOUAR 10°		40 DA			AR		OIT AT		10 101108	0.0			ER SEA	- CODE		-		UMBER
3 1 3	-	RT	3000		1710 L39553W	_						68				4389				4	X 2	6 8			0020
2 T 1	200	RI	3000	2 N	LJYJJJW	()	155	WAT			INIO		A ID TE	MP. °C		_	1 12	+ 04	141.	*	\ \ \ \	1 010	+	- 1	0020
							CC			-	SPEED	BARO-		WET	VIS.	NO. OBS.	OBSER	ECIAL VATIONS							
								ODE	(m)	DIR.	FORCE	(mbsl		BUL		DEPTHS	Cosek	VA 110143							
										07	522	207	172	15	6 7	13									
	- 1	MESSENGE					1						SPECIFIC VOL		₹ Δ D	1 0	מאטו		100	4~P	TOTA L-P	NO2-N	NO3-N	5104-5	
	i	TIME	of NO.	CARD TYPE	DEPTH	(m)	7 %	-	s •	1	SIG MA	-1	ANOMALY-X	107			OCITY	O 2 m1/		01/1	1/10 - gu	ug - at/1	yg = of/1	иg - ol/	
	-	HR 1/10	+									-		-	× 10	+			+-	-					+
	- 1				, ,,,,	20	1.0		750		25.1	_	000770		0000			'	1				l	1	1
		19	4	STI	000		18 18		350 350		2518 2518		00279	3 0	0000		5186								
		7.7	0	ST			18		350		251		00280	26	0028		5186								
		19	6	085	001		18		350		251		00200	, 0	0020		5188								
				ST			18		35J		251		00280	9	0056		5190								
				ST			18		350		2518		00280		0084		5191								
		19	6	085	00.	30	18	71	350	182	2518	8				15	5191								
				ST			18		350		251		00282	11	0141	15	5195								
		19	6	OBS	009		18		350		251	7				1:	5195								
				ST			18		350		2517		00282	9	0211		5199								
		19	6	OBS	007		18		350		2517		0070/		0 3 0 0		5200								
		19	4	ST(OBS	010		18		350 350		2517		002840	10	0282		5203								
		7.7	0	STI			17		347		2533		002690	1 1	0351		5156								
				ST			15		345		2548		002553		0417		5114								
		19	6	OBS	015		150		345		2548		00277.		0 . 1 .		114								
				STO			13		342		2574		002318	3	0538		050								
		19	6	085	020	2	13	46	342	62	2575						048								
				STI	025	0	11!	50	341	8	2607	7	002011	. 6	0647	14	988								
				ST			100	05	341	2	2628	3	001815	4	0742	14	943								
		19		085	030		09		341		2628						941								
		19	6	OBS	T037		091		340		2640						+917								
		1.0		STO			08		340		2647		001643	16	0915		+901								
		19	6	085	1041		08		340		2650		001/04		10/7		+894								
				STO			07 05		341		2673		001400		1067		+866								
				STO			050		342		2694		001198		1197		+838								
				ST			04.		343		2726		00102		1404		+810								
		19	6	085	T085		038		343		2733		00009	-	1 104		+793								
				ST			03		343		2735		000809	0	1489		1797								
				STI			03!		344		2739		000771		1568		+806								
				STI			03:		344		2744		000734		1644		815								
				ST			03		344		2748		000697		1715		+824								
				STO	130	0	029	96	345	1	2752	2	000658	8	1783	14	833								
				STO	140	0	0.2	77	345	4	2756		000619	9	1847	14	842								
		19	6	OBS	T141	4	0.2	74	345	46	2757	7				14	+843								

REFERENCE	SHIP			-	MARSO		STATION TH			OR	GINA	TOR'S		DEPTH	MAX. DEPTH	00	WAVE SERVATION	WE		CLDUD			VODC	
CTRY ID.	CODE	LATITUI		DNGITUDE 5	SOUA		(GMT1		YEAR	CRUISE NO.		ATION		BOTTOM	OF S'MPL'S		HGT PER	50	26	CODES			UMBER	
			1/10	1/10	10"		MD DAY HE			-							1	-						
31 120	ORT	3000	4N 1	39576W	122				968		021		. :	4206	13	04	4 4	X	4	6 8		1	0021	
					-	WAT	ER W	IND	BARO	٠	TEM		V15,	ND. OBS.	SPEC	CIAL								
						COLOR	TRANS. DIR.	SPEED OR	METER (mbsl			WET	CODE	DEPTHS	O85ERV	A TION S								
					-		04	S16	220			128	7	14			1							
							104	210	220	1 10	1	120	-	14			L.,						1	-
	MESSENGR	CAST	CARD	DEPTH [m]	T	°C	s */	SIGM	7-A	SPECIFIC V			A D		INO	02 ml/	PO4-P	TOTAL		02-N	NO3-N	5104-51	рН	S C
	HR 1/10	ND.	TYPE							ANOMAL	Y-410'	X	103	VELO	CITY		yg ≈ q1/1	10 - 04	טע וי/	g - ot/1	µg - σ1/1	yg = 01/		C
																								+1
	1	1 1	STO	0000	18	088	3512	251	. 8	0027	911	. 0	000	15	189		1							
	157		OBS	0000	18	380	35123	251	. 8					15	189									
	157		OBS	0008	18	384	35118	251	7					15	192									
			STD	0010	18	383	3512	251		0028	039	0	028		192									
			STD	0020		381	3512	251		0059	018	9 0	056		193									
	157		OBS	0020		381	35121	251							193									
			STD			0.88	3512	251		0028	040) 0	084		194									
	157		OBS	0045		379	35119	251							196									
			STD			380	3512	251		0028	104	- 0	140		197									
	157		085	0070	_	383	35122	251							202									
			STD			383	3512	251		0028	247	7 0	211		203									
	157	7	085	0090		384	35124	251							205									
			SID			325	3500	252		0027			281		189									
			STD			700	3474	253		0026	891	1 0	349		153									
	157	7	085	0135		559	34667	253		0076	770				141									
	1.5=		STO			528	3462	254		0026	228	3 0	416		134									
	157		085	T0183		529	34505 3439	255		0033	610		54.0		073									
			STO			419 162	3414	256 260		0023			540 651		992									
	157	,	085	0267		096	34085	260		0020	020	, ,	0.51		970									
	151		STO			030	3408	262		0018	1346	5 0	749		952									
	157	7	085	T0348		936	34079	263							925									
	191		STD			B16	3402	265		0016	082	2 0	924		888									
			STO			535	3398	267		0013			074		833									
	157	,	085	T0526		599	33979	261		001-					823									
	121		STD			540	3404	268		0012	407	7 1	206		812									
			STO			476	3414	270		0010			323		804									
	157	7	085	0707		472	34143	273							834									
			STO			435	3425	27		0009	769	9 1	427	7 14	805									
	157	7	OBS	0884	0.	405	34336	272	2.8					14	808									
			STD			400	3435	272		00008	701	1 1	519	14	808									
			STD		0	369	3443	273	39	0007	827	7 1	602	14	813									
			STO	1100	0	342	3449	27	46	0007	145	5 1	677	7 14	619									
			STO	1200	0	320	3452	275	51	0006	738	3 1	746	14	827									
			STO	1300	0	303	3454	275	54	0006	459	9 1	812	14	837									
	157	7	OBS	T1347	0	296	34541	275	54					14	842									

TABLE IX. Observed and interpolated oceanographic data for stations taken by USCGC WACHU-SETT at Ocean Station NOVEMBER, 28 January–18 February 1968, prepared from NODC Listing No. 31–1205 WC.

EFERE	NCE					MARCOC	ы Т		1011 71	115	т.	OPICI	NATOR"			TMAX	J	WAVE	1	Talous	_		
ray	ID.	CODE	LATITU	DE LO	DOLLE BOULDING	M ARSDE		TATE	ION TI		YEAR	CRUISE	STATIO	N	DEPTH	DEPTH	OBS	WAVE SERVATIONS	THES	CODES		12	MODE
-	NO.		•	1/10	* '1/10 =	10°	1" 1	NO I	H YAC	R.1/10		NO.	NUMBI	R	BOTTON	S'MPL	S DIR.	HGT PER SI	COD	TYPE AM	1	N	UMBER
3 1 1	205	WC	2952	25N 1:	3959 W	086 9	9	02	01 1	94 1	968	N13 0	01		3658	15	24		3	5 3			0001
							WAT	ER	W	IND	BARO	AIR T	EMP. °C	VIS.	NO.	5.91	CIAL						
							ROJO	TRANS.	DIR.	SPEED QR	METER (mbs)		BUL	CODE	OBS. DEPTHS	OBSER	ATIONS						
							000		24	514	149		18		14	-							
				1	1				24	314	145	7 109	1		1.4					1			1
		MESSENG	CAST NO.	CARD	OEPTH (m)	1 %		S	٠/	SIGM	A = T	ANOMALY-	UME IID ⁷	NYN. M.		OCITY	O2 m1/1	PO4=P	TOTAL-		NO3-N	51 04-51	ρН
		HR 1/10	1	1176										x 10 ³	VEC.	00111		µg = 01/1	уд - 01/l	no - 01/1	yg - a1/1	µg - 01/	
			Į		1			[-		١					1			
				STD	0000	187		35		251		00279	65	0000		187							
		19		085	0000	187			089	251						187							
		19	4	OBS	0009	186		35		252		00070		000		186							
				STO	0010	186		35		252		00278		0028		187							
				STD	0020	186		35		252 252		00278		0056		188							
		19	/	085	0030	186			J93	252		00278	49	0084		189							
		19		085	0031	186			092	252						193							
		1 2	-	SID	0050	186		35		252		00279	2 1	0139		193							
				STD	0075	185		35		252		00278		0209		195							
		19	4	085	0075	185			092	252						195							
		19		085	0097	185		-	092	252						198							
		- 1		SID	0100	184		35		252		00277	95	0279		194							
				STO	0125	173		34		253		00270		0347		163							
		19	4	OBS	0145	164			648	253			-			139							
				STO	0150	162		34		254		00262	2.8	0414		134							
		19	4	085	T0193	146	51	34	394	256	1				15	086							
				STO	0200	142	26	34	36	256	6	00239	71	0539	15	075							
				SID	0250	120	06	34	19	259	7	00210	64	0652	15	007							
		19	4	085	0290	106	68	34	094	261	5				14	964							
				STD	0300	104		34		261	8	00190	83	0752	14	958							
		19	4	085	T0388	086			048	264						907							
				STD	0400	084		34		264		00162		0929		898							
				STD	0500	064		34		267		00136	63	1079		837							
		19	4	OBS	T0579	053			022	268						805							
				STO	0600	051		34		269		00120		1207		803							
				STD	0700	048		34		270		00105	66	1320		798							
		19	4	OBS	0776	042			246	271						798							
				STO	0800	042		34.		272		00094		1420		799							
		1.0	,	\$10	0900	039		34		272		00086	78	1511		808							
		19	4	085	T0969	038			403	273		00000	2.3	15.05		813							
				STD	1000	037		34		273		00080		1595		815							
				STO	1100	035		34		274		00076		1673		823							
				STD	1200	033		34		274		00072		1747		831							
				STD	1300 1400	031		34		275		80000		1618		839							
		1.0	I.	STD		029		34		275		00064	46	1885		848							
		19	4	OBS	T1497	0.27	12	34	553	275	0.0				14	857							

RENCE		нір	LATITU	DS LD	MGITUDE LE	M ARS	DEN	STATIO:	N TIM	YEAR		ORIGIN UISE S	ATOR		DEPTH	MAX		WAVE SERVATION	s wi		CLOUD		r ST	IODC ATION	
ID.	C	BDE	*	1/10	1/10	10*	1°	MÖ DA	Y HP.		100		MUN		BOTTON	S'MPL	'S DIR.	H GT PEP	SEA CO	DE	TMA 39Y		N	UMBER	
120	5 V	NC .	2957	N 1:	39555W	086	99	02 04	+ 00	09 196	8 N	13 00	2	Î	4114	15	29		2		3 6			0002	
1	-1 .					[WAT		W 1	ND I	ARO-	AIR TE		c	NO.	1		' ' '	_ '				,	0000	
								TRANS.	DIR.	SPEED MI	ETER	DRY	W		OBS.		ECIAL VATIONS								
							CODE	lm)		FORCE IT	nbs)	8ULB	BU			-									
									32	502 2	00	206	1	94 8	14										
		TIME OF	CAST ND.	CARO TYPE	DEPTH (m)	7	*C	s °/		SIGMA-T	S P S	ECIFIC VOLU	M.E 0.7	₹ △ D DYN. M X 103		UND	02 ml/	PD4-P	101AL		102-N ig - al/l	ND3-N µg - ol/l	\$1 D4-51 ug = a1/1	рН	200
	HK	1/10			-	-					+		-												+
		- 1		STD	0000	1	925	351	4	2508	1	02888	1	0000	1 15	202	I	1	1	- 1	- 1				1 '
		009		085	0000		925	351		2508			•	0 0 0 0		202									
		00,		STD	0010		884	350		2515	C	002825	2	0029		192									
		009		085	0010	1	884	350		2515					15	192									
				STD	0020		879	350		2516	C	002818	0	0057		192									
				STO	0030	1	874	350	9	2517	C	002810	8	0085	15	192									
		009		085	0030	1	874	350	90	2517					1.5	192									
		009		OBS	0049	1	868	350	80	2518						193									
				STD	0050		868	350		2518	C	002810	5	0141		194									
		000		085	0074		868	350		2518						198									
				STO	0075		868	350		2518	C	002820	4	0212		198									
		009		OBS	0099		868	350		2518	-	001000		0303		202									
				STD	0100		865	350		2518		002827		0282		201									
				STO	0125		776	348		2526		002762		0352		177									
		009		STO	0150 0151		671 667	346		2536 2537		002667	1	0420		148									
		009		085	0200		415	343		2564	_	002411	2	0547		071									
		009		STD 085	0200		396	342		2566		102411)	0.547		065									
		009		STD	0250		213	341		2595	-	002126	. 7	0660		010									
				510	0300		044	340		2619		001903		0761		957									
		009		OBS	0303		035	340		2620		,01,03	6	0.01		954									
		00,		SID	0400		802	340		2652	(001593	2	0936		1883									
		009		OBS	10402		798	340		2652			_			881									
		00,		STD	0500		627	340		2677	(001347	7	1083		831									
				STD	0600		505	340		2694		001188		1210		798									
		009		085	T0605		500	340		2695					14	797									
				STD	0700	0	458	341	8	2709	(001046	8	1321	14	+797									
				STD	0800		421	342	9	2722	(000930	16	1420	14	800									
		009		OBS	0806	0	419	342	92	2723					14	+800									
				STD	0900	0	393	343	6	2731	(000854	5	1510	14	806									
				STD	1000	0	367	344	3	2739	(000780	4	1591	14	812									
		009		085	T1005	0	366	344	32	2739					14	813									
				STD	1100		343	344		2745	(000723	1	1667		819									
				STD	1200		321	345		2750		000675		1736		827									
				STD	1300		301	345		2755		000636		1802		836									
				STD	1400		282	345		2757		000612		1864		845									
				STD	1500		265	345		2759	(000598	17	1925		+854									
		009		085	T1514	0	263	345	62	2759					1 4	856									

REFERENCE						- ex	MARSDEN	STATION		1		ORIGIN	ATOR"	5		2118 0	WAX.		WAY			WEA-	CLOND			1000	
CTRY ID.	CODE	LATITU		LONGI	TUDE	DRIFT	SOUARE	IGMT		YEAR	₹ [STATIO		801	10	OF			TIONS		THER	CODES)		UMBER	
COOE NO.	0001		1/10	·	1/10	=	10° 1°	MO DAY	HR,1/10		_	NO.	NUW8	R	1001	5,	MPL'S	DIR,	HGT	PER SI		0001	TYPE AM	-			
31120	5 WC	2946	3 N	1401	177W		087 90	02 04	196	196	8	N13 00	3		41	98	15	30			2		6 8			0003	
							WA	TER	MIND	8.4	A PO+	AIR TE	MP. °C		N	10.	SPECI	IA I									
							COLOR	TRANS. DIR	SPEE OR	D M	ETER	DRY	WE		0	PTHS OF	SERVA	TIONS									
							CODE	(m) DIK	FDR		nbs)	BULB	BUL	8	100	11113											
								0.9	50	6 2	17	189	18	3 7	1	4											
	MESSENGR	7740	CAR					<u> </u>				PECIFIC VOL	IAAS	₹ △ 0	0	SOUNG			Po	D4-P	101	A L-P	NO2-N	NO3-N	\$104-5		5
	11944.6	OF ND.	TYP		DEPTH I	m1	T °C	s 1/4.	510	GMA⇔T		ANOMALY-E	107	DYN. / X 10 ³	٧.	VELOCI		D ₂ m[/1		- 01/1			ug - a1/1	μg - α1/ l	pg = a1/1	pH	CC
	HR 1/10	-						-			+		-		-		-		-		1						+
						_	1020	25.71		c 1 2		002211	,	000	_	1520	5.7.										1
	19	,	OB:	TO	000		1929	3521 35211		513 513		002846) 4	000	U	1520											
																1520											
	19	0	OB:	5 TO	000		1924 1924	35211 3521		514 514		002836	. 0	002	R	1520											
				TO	002		1924	3522		515		002828		005		1520											
	19	6	0B:		002		1921	35223		516		002020	, 0	00.,		152											
	17	0		10	003		1920	3522		516		002826	0.6	008	5	1520											
	19	6	0B:		004		1918	35224		516		002020	, ,	000		1520											
	1.7	0		70	005		1917	3522		517		002821	7.1	014	2	1520											
				TD	007		1909	3520		517		002834		021		152											
	19	6	0 B :		007		1908	35193		517						152											
	19		06:		009		1867	35114		521						1520											
		0		TD	010		1863	3510		521		002800	9	028	3	1520	01										
				TO	012		1805	3498		526		002758	30	035	2	1518	8.7										
	19	6	OB:		014		1721	3483		535						1516	54										
			5	TD	015	0	1708	3481	2	537		002664	+4	042	0	1516	50										
			5	TD	020	0	1418	3433	2	565		00240	+2	054	7	150	72										
	19	6	0B	S	T020	0	1418	34328	3 2	565						150	72										
			S	TD	025	0	1211	3420	2	597		00210	3.3	066	0	1500	09										
	19	6	OB.	S	029	7	1054	3410	7 2	618						1490	51										
			5	TD	030	0	1047	3410	2	619		00190	10	076	0	149											
	19	6	OB.	S	T039	6	0844	3403	7 2	647						148											
			5	TD	040		0835	3404	2	649		00162		093		148											
				TO	050		0643	3404		676		001360	9	108	5	148											
	19	6	OB		T059		0519	3404		692						148											
				TD	060		0514	3406		694		00119		121		1480											
				TD	070		0462	3418		709		00105	16	132	5	147											
	19	6	08		078		0425	3426		720		00007		2 /. 2	_	147											
				TO	080		0422	3428		721		00093		142		148											
	, -			TD	090		0395	3436		730		00085	5 9	151)	148											
	19	0	ОВ		098		0373	3441		737		00079	1 2	159	7	148											
				TO	100		0370	3442 3448		738		00079		167		148											
				TO	110		0346	3448		745		00067		174		148											
				TO	120		0303	3454		754		00064		180		148											
				TO	140		0283	3456		757		00061		187		148											
	10		OB		T148		0268	3456		759		00001	- 0	107	-	148											
	19	0	OB	3	1140		0.200	5490	2 2	1277						140	2 -										

REFERENCE	SHIP			14. 1.01	MARSOEN SQUARE	STATION THE		ORIGINATO		OEPTH OEP		WAVE SERVATIONS	WEA-	CLOUD			NOOC	
CIRY IO,	COOF	LATITU		NGITUOE		MO I DAY THE	YEAR	CRUISE STAT		BOTTOM S'ME	F L	HGT PER SE	COOK				U M8ER	
	-	3004	1/10				90 1968			4160 1	-			66			0004	
31 120	15 WC	3004	. 14 1 T.	+003 W	WAT		INO	A ID TEAAD	%	NO	2 1 11	12121	ŀ	1 010	1	- 1	0004	
					COLOR		SPEED MET	0-	ET CODE	OBS. Dese	PECIAL RVATIONS							
					COOE	TRANS. DIR.	FORCE (mb	s) 8ULB 8	1FB	OEFTHS 003E								
						14	515 19	0 189 1	83 7	13								
	MESSENGR	CASI	CARO					SPECIFIC VOLUME	≨ ∆ o oyn. м	SOUNO		, PO4-P	TOTAL-P	NO2-N	NO3-N	SI O4-SI	l	3
	HR 1/10	NO.	TYPE	OEPTH Imi	T C	s °/	SIGMA-T	ANDMALY-X107	X 10 ³	, AFFOCITA	O ₂ ml/	μg = 01/1	yg - 01/1	ug - 01/1	µg - 01/l	µg - 01/1	pН	c
	ISK 1710					+	-											
	1		STD	0000	1912	3518	2515	0028280	0000	15199		1 1				ı		
	190	3	085	0000	1912	35179	2515			15199								
	190)	085	0006	1907	35176	2516			15199								
			STD	0010	1907	3518	2516	0028212	0028									
			STD	0020	1906	3517	2516	0028242	0056									
	190)	OBS	0025	1905	35171	2516			15201								
			STD	0030	1901	3516	2516	0028254	0085									
	190)	085	0042	1890	35131	2517			15199								
			STD	0050	1879	3510	2517	0028225	0141									
	190	3	OBS	0065	1865	35075	2519			15195								
			STD	0075	1863	3509	2520	0027997	0211									
	190	3	OBS	0084	1860	35095	2521			15197								
			STD	0100	1847	3509	2524	0027690	0281									
			STD	0125	1826	3501	2523	0027855	0351									
	190)	OBS	0126	1825	35000	2523	003/300	0419	15193 15155								
	1.0	-	STD	0150	1693	3475	2536	0026738	0419	15116								
	190)	OBS	T0174	1562	34539 3434	2550 2571	0023469	0544									
			STD	0200	1394	3410		0023469	0659									
	190	2	STD OBS	0250	1147	34094	2601 2602	0020049	000	14983								
	190	J	STD	0300	1036	34094	2620	0018874	0753									
	190	3	OBS	0337	0958	34092	2633	0010014	0,52	14932								
	1.71	9	STD	0400	0815	3410	2656	0015492	0925									
			STD	0500	0637	3411	2682	0013040	1068									
	19)	085	T0503	0633		2002											
			STD	0600	0531	3412	2696	0011716	1192	14810								
	190	3	OBS	0673	0475	34125	2703			14799								
			STD	0700	0464	3416	2707	0010688	1304	14799								
			STD	0800	0424	3428	2721	0009416	1404	14801								
	19	3	085	T0840	0410	34318	2726			14802								
			STD	0900	0390	3434	2730	0008628	1494	14804								
			STD	1000	0361	3439	2736	0008059	1578	_								
			STD	1100	0337	3443	2742	0007537	1656									
			STD	1200	0318	3447	2747	0007069	1729									
			STD	1300	0304	3451	2752	0006662	1798									
	19	0	OBS	T1330	0301	34527	2753			14841								

FERENCE Y ID.	SHIP	LATITU	DE LC	NGITUDE 1/10	MARSO	RE	STATION T		YEAR C		ATDR'S TATION IUMBER		DEPTH DEP	TH OB	WAVE SERVATIONS	WEA- THER CODE	CLOUD		51	NODC TATION UMBER
-		20			10°		MO DAY						13 W		1	-	1	-		
1 2 0	15 WC	2952	5N 13	3959 W	086				968	N13 00		4	663 1	5 17	3 2		66			0005
					-	WAT		VIND	BARO-	AIR TEA		VIS.	NO.	PECIAL						
						DLDR	TRANS. DIR.	SPEED	METER (mbs)	DRY BULB	WET	CODE		RVATIONS						
						-001		FORCE	+											
		., .					13	504	173	194	189	7	14							
	MESSENG		CARD	DEPTH (m)	1	%	s °/	SIGM		SPECIFIC VOLU		△ D.	SOUND	02 ml/	, PO4~P	TOTAL-P	NO2-N	NO3-N	SI D4-SI	
	HR 1/1		TYPE	Otter this	'	-	3 /**	31GW	^-1	ANOMALY-ET	מ' נ	103	VELOCITY	02 mi/	µg = 01/1	μg - e)/(ug = at/1	μg = q1/1	µg = at/1	pH
					1															
	1	1 1	STD	0000	1.8	86	3505	25]	1 '	002860	7 0	000	15190	1	1				1	1
	18	R	OBS	0000		86	35047	251		002000	, ,	,00	15190							
			STO	0010		83	3505	25		002853	3 0	29	15191							
	18	8	QBS	0010		83	35052	251					15191							
			STD	0020	18	78	3507	251		002831	6 0	57	15191							
	18	8	OBS	0028	18	75	35030	251	16				15192							
			STD	0030	18	75	3508	251	16	002820	5 0) 85	15192							
	18	8	OBS	0047	18	75	35078	251	16				15199							
			STD	0050	18	77	3508	251	lό	002832	1 0	142	15196							
	18	18	085	0071	18	85	35110	251	16				15202							
			STO	0075	18	84	3512	251	. 7	002829	3 0	213	15203	}						
	18	8	088	0094	18	81	35124	251	1.8				15205	,						
			STD	0100	18	62	3508	252	2.0	002813	0 0	283	15200)						
			STD	0125	17	73	3490	252	28	002741	0 0	353	15176							
	18	8	OBS	0143		0.2	34764	253					15157	7						
			SID	0150		69	3470	253		002656	0 0	+20	15147	7						
	18	8	085	T0192		76	34392	255					15090							
			STD	0200		33	3436	256		002411		47	15077							
			STD	0250		98	3419	259		002091	6 0	559	15005							
	18	8	OBS	0286		66	34104	26]			_		14963							
			STO	0300		35	3409	262		001887	9 0	759	14954							
	18	8	085	10379		71	34046	264		00145-		2 5 4	14906							
			STO	0400		27	3404	265		001608		934	1489							
	2.0		STD	0500		49	3473	261		001381	0 1	083	14840							
	18	8	085	10573		53	34012	268		001774	c .	3 2 0	14813							
			STD	0600		33	3405	269		001224		213	14810							
	1.0	0	STD	0700 0765		69	3418 34248	270		001060	0 1	328	14802							
	18	0	STD	0800		26	34248	272		000943	0 1	+28	14800							
			STD	0900		98	3436	273		000943		518	14808							
	18	10	085	0961		81	34403	27:		000000	→ 1	10	14811							
	10	0	\$10	1000		71	3443	27		000785	1 1	00	14814							
			STO	1100		46	3448	274		000726		576	14821							
			ST0	1200		23	3452	275		000677		746	14828							
			STD	1300		02	3454	27		000044		140	14836							
			310	1300	03	02	2424	68.	109											
			STO	1400	0.2	84	3455	279		000622		576	14845							

RENCE				IL E	MAR	SDEN		ION TIM				ORIGIN	ATOR	° S		PIH	MAX. DEPTH		WAVE	2015	WEA-	CLOUD			HODC	
ID.	CDDE	LATITUE	DE LON	AGITUDE PO	SQU	ARE	- 1	GMTH	Y Y	EAR	CRUI		TATIO			10	OF	00.	SERVATIO		THER	CODES		2,	UMBER	
NO.	CODE	•	1/10	1/10	10*	11.	MD	AY HP.	1/10		ND	. 7	IUM8	ER	1001	2	5'MPL"	+	HGT PE	5EA	0000	TYPE AMI				
1205	WC	2954	8N 13	9507W	086	99	02	08 1	93 19	968	NI	3 00	6		43	89	15	15	2 2			6 9			0006	
1	1		1	' '		WAT	ER	WI	ND T	BARC	20	AIR TE	AP. °C		N	D.	505	CIAL								
							TRANS.	DIR.	SPEED	METE	R	DRY	W E		0	200		ATIONS								
						CODE	Im I		FORCE	lmbs	1)	BULB	BUI	_												
								00	500	15	6	200	1 9	4 8	1	. 4										
	WESSENCE.				T		T				SPECI	FIC VOLU	AA F	≥ △ □	5	SOUN	ND.		PD4	-P T	OTAL-P	NO2-N	NO3-N	51 D4-51		S
	MESSENGR TIME	M ND.	TYPE	DEPTH (m)	1	, €	S	*/	SIGMA	1-1		MALY-X1		DYN. 1	и.	VELDO		Q2 ml/l	yg -		1\10 - gu	μg = 01/I	yg - a1/1	μg = a1/l	pH	c
	HR 1/10	-			+						_		-		-				_	-						Ħ
			673	2000	1	007	34	0.7	250.		0.0	12945	,	000	0	151	92		1		1				1	
			STD	0000		1897 1897		91 967	250		00	12940	4	000	U	151										
	193	3	085			1889	35		251		0.0	2872	a	002	0	151										
	100		STD	0010		1889		Ú45	251		00	,20,2	7	002	_	151										
	193	,	0B5 STD	0010		1883	35		251		0.0	2843	6	005	8	151										
			STO	0020		1878	35		251			2822		008		151										
	193	2	085	0030		1873		037	251			2022	1	000		151										
	177	9	STO	0050		1875	35		251		0.0	2817	,	014	2	151										
	193	,	085	0050		1875		004	251			,	-	~ -	_	151										
	17)	STD	0075		1876	35		252		0.0	2806	3	021	3	152										
	193		OBS	0075		1876		124	252		0.0	, , , , , ,				152										
	17.	,	510	0100		1867	35		252		0.0	2797	- 64	048	3	152										
	193	2	085	0100		1867		118	252		0.0	, , , , ,		0 - 0	~	152										
	17.	,	510	0125		1747	34		253		0.0	2709	16	035	2	151										
			STD	0150		1629	34		254			2617		041		151										
	19:	2	085	0152		1620		618	254							151										
	17.	,	STD	0200		1397	34		256		0.0	2374	9	054	3	150										
	19	3	OBS	T0205		1375		281	257							150	158									
	17.		STD	0250		1177	34		260		0.0	2060	15	065	4	149	997									
			STD	0300		1002		10	262		0.0	1825	1	075	1	149	942									
	19	3	OBS	0305	(0987	34	091	262							149	937									
		-	STD	0400		795		U 3	265		0.0	01573	3 3	092	1	148	380									
	19	3	OBS	0405	-	3786	34	021	265							148	877									
			STO	0500		0633	-	09	268		0.0	01312	20	106	5	148	834									
			STD	0600		0514	34	16	270	2	0.0	01119	3	118	7	148	803									
	19	3	OBS	T0616		0499																				
		-	STD	0700		0454	34	23	271	4	00	01004	19	129	3	147	796									
			STD	0800		0412	34	30	272	4	0.0	0091	26	138	9	147	796									
	19	3	085	0810		0408	34	305	272	5						147	796									
		_	STO	0900		0388		37	273		00	0084	1.3	147	7	148	804									
			STD	1000		0367	34	43	273	9	01	00780) 4	155	8	148	812									
	19	3	085	1015		0364	34	441	274	0						148	814									
			STD	1100		0347	34	46	274	3	0.0	0074	18	163	34	145	821									
			STD	1200		0327	34	49	274	7	01	0070	78	170	ó	148	829									
			STD	1300		0307	34	51	275	1	0.0	0067	34	177	75	148	838									
			STD	1400		0288	34	53	275	5	01	0063	8	184			847									
			STD	1500		0270	34	56	275	8	0	0660	8	190	3	148	856									
	19	3	OBS	T1530		0265	34	564	275	9						148	859									

FERENCE Y ID.	SHIP	LATITUI	DE LC	NGITUDE HE	MARSDEN SDUARE	STATION (GM	TI YEAR	CRUISE	STATION NUMBER		TO OF	H OB	WAVE SERVATIONS	CDDE	CODE2		5	NODC TATION IUMSER
1120	5 WC	3004		4031 W	123 00			8 N13 00	7	١,,		1			1	1		
1/120.) nc	3004)A T.	4001 WI		02 11	WIND	A ID TE	MP. °C		663 1	3 29	15/21	- 1	0 3	1	1	000.
							SPEED AAF	KO-	1			ECIAL VATIONS						
					CDDE	IMI DII		bs) BULB	BULB	DE	PTHS	VAIIDRS						
						30	5 503 1	56 200	156	8 :	13		1					
	MESSENG					1	1		ME E A	D	4		1	T			T	T
	BALE	OF NO.	CARD	DEPTH (m)	T °C	5 %.	SIGMA-T	ANOMALY-X	DYN.	M.	VELOCITY	02 ml/	PO4-P	f0TAL-P ug = o1/l	ND2-N µg - 01/1	ND3-N µg - a1/I	51 O 4-51 pg - at/1	рН
	HR 1/10					-			x 1	0-			1.			py - 0.71	7.	-
									_ \			ŀ						
	0.0		STD	0000	1937	3520	2510	002871	1 000	00	15206							
	00		OBS	0000	1937	3520					15206							
	00	1	065	0009	1932	3520		003040			15206							
			STD	0010 0020	1931 1925	3520 3520	2512 2513	002860			15206							
	00	1	0B5	0020	1922	3520		002848	6 00!	0 /	15206							
	00	4	STD	0030	1922	3520	2514	002845	0 00	9.6	15207							
	00	1	085	0046	1923	3520		002043	001	00	15210							
	0.0	•	STO	0050	1924	3520	2513	002858	0 01	4.2	15211							
	0.0	1	0B5	0069	1925	3520.		00203(T 2	15214							
			STD	0075	1924	3520	2513	002867	2 04	14	15215							
	0.0	1	OB5	0092	1922	35200	2514				15217							
			STD	0100	1883	3513	2518	002827	5 021	85	15207							
			STD	0125	1759	3490	2531	002708	4 03	5 5	15172							
	0.0	1	065	0141	1676	3475	7 2540				15148							
			STD	0150	1623	3465	2544	002589	9 04	21	15132							
	00	1	OB5	T0191	1401	3429	3 2566				15065							
			STD	0200	1357	3427	2573	002324			15051							
			STD	0250	1140	3415	2606	002015	7 06	52	14984							
	00	1	OBS	0282	1029	3410					14949							
			STD	0300	0987	3408	2628	001814	9 07	48	14936							
	00	1	OBS	0372	0830	3403		0.150		1.5	14889							
			STO	0400	0767	3403	2658	001528			14869							
	0.0		STD	0500	0585	3403	2683	001292	8 10	06	14814							
	0.0	1	OBS	0550	0520	3403.			_		14796							
			STD	0600	0491	3410	2699	001135		-	14793							
	00	1	STD OBS	0700	0439	3423	2715	000987	1 12	54	14790							
	00	T	STO	0725 0800	0427	3425		000020	0 13	7.0	14789							
			STD	0900	0392	3434	2723	000920			14796							
			STO	1000	0372	3434	2729 2734	000871			14805							
			STD	1100	0352	3442	2740	0000774			14822							
			STD	1200	0332	3447	2745	000725			14831							
			STD	1300	0312	3451	2751	000675			14840							

REFERENCE	SHIP			- a	MARSO	EN	STATION	IME			ORIGIN	ATOR'S		OEPTH	MAX.	. 1		A VE	WEA	CLOUD	T		NODC	
CODE NO.	CODE	LATITU	1/10	ONGITUDE	10°		I YAQ ON		YEAR			TATIO		BOTTOM	OF S'MPL'			T PERT S	THER	CODES			TATION	
311205	WC	2958		3955 W	_	_		200	1968	_	13 00			4389	15	1			A	5 5	1	-		
,					1 2 2 - 1	WAT		WINO		-	AIR TE			NO.			7 7	[-]	1	1 212	1	1	0008	
						OLOR	TRANS. DIR.	SPEED		TER	DRY	WET		085.		CIAL	s							
					10	ado	(m)	FORC		-	BULB	BULS		DEPTHS			4							
							23	501		00	200	15	0 8	14	L		1					,		
	MESSENGR TIME (CAST NO.	CARD	DEPTH Imi	т .	С	s °/	SIG	M.AT		IFIC VOLU		₹ A D	300	סאנ	O ₂ ml		PO4-P	TOTAL-P	NO2-N	NO3-N	5104-5	рн	5
	HR 1/10	I 100,	ITPE		_					An	OMALY-XI	ů.	X 10 ³	VELO	DCITY			ug + a1/i	μg - 01/I	μg ~ a1/]	yg + a1/1	νg − α1/	1	c
	200	,	STO		18		3503		13	0	02839	3	0000		186									
	200	,	0BS 5T0	0000	18 18		35030 3503		13	0	0 2 0 2 0	^	0000		186									
	200)	085	0011	18		35027		15	0	02829	0	0028		186 186									
			STO		18		3503		15	0	02831	7	0057		188									
			STO	0030	18	66	3503		15		02835		0085		189									
	200)	OBS	0031	18	66	35032	25	15					15	189									
	200		STO		18		3504		15	0	02837	6	0142		193									
	200)	OBS	0052	18		35040		15						193									
	200	1	STO OBS	0075	18 18		3507 35072		16	0	02839	2	0213		199									
			STO		18		3509		18	0.1	02826	2	0283		202									
	200)	OBS	0103	18		35087		19		02020	_	0200		202									
			STO		18	51	3504	25	19	0	02824	0	0354	15	201									
			STO		17		3492		27	0	02762	7	0424		184									
	200)	085 ST0	0156	17 14		34878		29			,	0.50.		178									
	200)	035	T0210	14		34337		61	0	02446	1	3554		090									
			STO		12		3423		93	0	02146	1	3669		021									
			STO	0300	10	63	3413		18		01906		0770		965									
	200)	OBS	0313	10		34106		24					14	952									
	200		STO	-	08		3403		49	0	01615	9	0946		892									
	200	,	08S ST0	T0412	08		34021		52			0			885									
			STO		05		3404		74		01378 01211		1096 1226		842 807									
	200		085	T0630	04		34063		96	0	01211	0	1220		800									
			STO		04		3416		0.8	0	01061	6	1339		797									
			STD		04		3428		2.2	01	00927	4	1439		796									
	200)	OBS	0826	04		34301		25						797									
			STO		03		3436		31		00849		1528		804									
	200)	STD OBS	1000	03		3442		38 40	01	00790	I	1610		813									
	200		STD		03		3446		43	0.0	00745	3	1686		816 822									
			STO		03		3449		47		00711		1759		831									
			STD	1300	03	09	3451		51		00675		1829		839									
			STO		02		3453		55	0.0	00639	0	1894	14	847									
	200)	STO		02		3456		58	01	00601	8	1956		855									
	200	,	OBS	T1536	0.2	59	34568	27	60					14	858									

REFERENCE	SHIP	LATITU		1010171100	E M	ARSDEN DUARE	STATION TI	ME	YEAR		INATO		DEPTH	MAX.	0.81	WAVE SERVATIONS	WEA-	CLOUD			NODC	
CODE NO.	CODE	LATITU	1/10	LONGITUDE '1/10	S NOC S		MO I DAY IH	9.1/10	TEAK	CRUISE ND.	TATE		BOTTON	S'MPL		HGT PER SE	CODE	TYPE AM			MOITATE REBMUN	
31120	5 WC	2958		13900 W	0.8				1968		09	-	4389			-					0000	
1 311120	7 4 6 1	2,70	ן אוכ	13700 W	1 100	WA		IND	$\overline{}$	AID	EMP.	°C	NO.	1		3 2	1	116	1	1	0009	
						CDLOR		SPEED	BARG METE	R DRY	W	ET COD	OBS.	DBSERV	CIAL ATIONS							
						CDDE	(m) DIA.	FORCE	{mbs) BULB	81	LB	DEPTHS									
							17	\$05	15	9 189	1	61 8	14									
	MESSENGR	CAST	CARD	DEPTH		T °C	s */	5101	AA-T	SPECIFIC VO		₹ ∆ D DYN. M	SD	UND	D2 ml/l	PO4-P	101AL-P	NO2-N	NO3-N	SID4-S	. pH	S
	HR 1/10	Y NO.	TYPE	Derin	2117		1 "	3101		ANOMALY.	-X10?	x 103	VEL	DCITY	02 11171	µg = q1/1	PB - 01/3	νg = σt/l	yg = at/1	µg = at/	1 97	C
								1														
	1	' '	ST	0 000	0	1867	3506	25	17	00280	56	0000) 15	185		1 1				ι		
	19	5	OBS	000	0	1867	35060	2.5	17				15	185								
	19	5	OBS	000	9	1867	35060	25	17				15	186								
			ST			1867	3506	25	-	00280		0028		187								
		_	ST			1867	3506	25		00280	95	0056		188								
	19	5	OBS			1867	35067	25		00301				190								
	19	c	ST OBS			1867 1866	3507 35069	25 25		00281	0 /	0084		190								
	19:)	ST			1867	3507	25		00281	6 H	0141		193								
	19	5	OBS			1870	35062	25		00201	0.0	0141		197								
	± 7.	_	ST			1869	3507	25		00282	86	0211		198								
	19	5	QBS			1868	35091	2.5						200								
			ST	0 010	0	1867	3509	25	19	00281	58	0282	1.5	202								
			ST	D 012	>	1866	3510	25	20	00281	47	0150	1 15	206								
	19	5	OBS	013		1865	35106	25						207								
			ST			1780	3494	25		00273	65	0421		183								
	19	5	OBS	T018		1556	34531	25						116								
			ST			1474	3443	25		00244		0>51		091								
	10	-	ST			1236	3416	25		00218	42	0667		017								
	19	כ	08s	027 D 030		1145	34090 3408	26 26		00194	65	0770		989								
	19	5	0B5	T036		0905	34068	26		00174	0)	0110		916								
	4.7.	_	ST			0811	3405	26		00157	64	0946		887								
			ST			0624	3402	26		00135		1093		829								
	19	5	OBS	T053	9	0569	34001	26	82				14	814								
			ST	D 060	0	0519	3406	26	93	00119	97	1220	14	+804								
			ST			0454	3417	27		00104	94	1333		795								
	19	5	OBS			0446	34185	27					14	795								
			ST			0419	3428	27		00093		1432		799								
	1.5	-	ST			0390	3438	27		00083	62	1521		+805								
	19	5	OBS			0389	34382	27		00071		160		805								
			ST			0363	3442 3445	27		00078		1602		810								
			ST			0339	3445	27 27		00074		1678		+817 +825								
			ST			0297	3452	27		00065		1818		1834								
	19	5	OBS	T138		0283	34544	27		0000	00	1016		842								
	13	-	003	1100	_	0200	J - J - 4 - 4	21	20				1 "	042								

REFERENCE	SHIP						SDEN	STATION			1	ORIGIN	ATOR'S		OSPTH	MAX.		WA	VE		EA-	CLOUD			NODC	
CTRY ID.	CODE	LATITU		LONGI	UDE	5 7	JARE	(GM		YEAR	CRUIS		STATIO		BOTTOM	OF	00		ATIONS	1 00	ER DE	CODES			UMBER	
	-		1/10		'1/10	10		MO DAY			-	+				S'MPL'			PER S	EA	\dashv	TYPE AM				
31 1209	WC	3014	N	1393	39 W]	127		02 13	-	1968	NI				4572	13	20	5 5	2	- 1	- 1	9 2	l		0010	1
							COLOR		WIND	D BAR		AIR TE	WET	VIS.	NO. OBS.		CIAL									
							COOE	IM) OI	R. OR	1		BULB	BUL		DEPTHS	ORZEKA	ZNOITA	·								
								2	9 51	0 04	7	206	17	9 8	14											
	MESSENGE										141.01	IC VOLU		₹ Δ D	sou			ή,	O4-P	TOTAL	T	NO N	NO N	SI O4~S:		5
	MESSENGP TIME	T NO.	CAR1	E	DEPTH IM	1	r 'c	s *4.	. 510	GMA-T		MALY-X		OYN. M. X 10 ³	. VEFO		O 2 m1/		g - at/1	101AL		NO2-N ug - 61/1	NO3-N µg - o1/l	21 O4-21	pH	C
	HR 1/10					-					-			A 10	-			-			+					+
			5 1	0.1	0000		1840	3493	2	514	0.0	2833	13	0000	15	176		- 1			- 1				1	
	187	7	085		0000		1840	3493	_	514	00	2033	, ,	0000		176										
	187		085		0008		1840	3493		514						177										
			ST		0010		1840	3494		515	00	2831	. 8	0028		177										
			ST	ГЭ	0020		1841	3496	2	516	00	2821	9	0057	15	179										
	18	7	085	S	0027		1841	3496	2 2	516					15	181										
			S1		0030		1841	3496		516	00	2824	15	0085		181										
	187	7	OBS		0043		1842	3496	_	516						184										
		_	51		0050		1842	3497		516	00	2830	2	0141		185										
	187	1	083		0065		1842	3496		516		2020		0010		187										
	18	7	083		0075		1842 1840	3497 3496		516 517	00	2839	3	0212		189 190										
	10	1	S1		0100		1832	3496		518	0.0	2827	7 7	0283		190										
			51		0125		1819	3495		520		2815		0354		190										
	187	7	085	5	0125		1819	3494	6 2	520					15	190										
			ST	r D	0150		1595	3454	2	542	00	2608	35	0421	15	123										
	187	7	083		10165		1481	3435		553						087										
			S1		0200		1311	3420		577	00	2285	4	0544		035										
	187	7	089		0248		1121	3406		603						976										
			SI		0250		1115	3407 3405		604		2033		0652		974										
	187	7	089		0300 0330)98U)908	3403	_	626 637	00	1828	3 4	0748		933 912										
	10	4	51		0400		773	3399		654	0.0	1566	. 8	0918		871										
			51		0500		0623	3399		674		1375		1065		829										
	18	7	089		0500		0623	3398		674		, ,				829										
			S1		0600		0540	3406		691	00	1225	9	1195		813										
	18	7	085	5	0693)477	3413	1 2	703					148	803										
			S1		0700		0473	3414		705		1094		1311		803										
			51		0800		0424	3424	_	718	0.0	0971	. 2	1415		800										
	187	7	085		0850		0403	3428		723	0.0	n 0 2 c		1 4 0 7		800										
			S1		0900		384	3432		728		0873		1507		801										
			51		1000		351	3439		737		0791		1590		805										
			S1 S1		1100		0327	3445		744 749		0726 0686		1666 1737		812 823										
			51		1300		3304	3452		752		066]		1804		837										
	18	7	085		Г1305		0304	3452		752	00	0001		1007		838										
									_																	

TABLE X. Observed and interpolated oceanographic data for stations taken by USCGC FANEY at Ocean Station NOVEMBER, 18 February-10 March 1968, prepared from NODC Listing No. 31-1209 RT.

																,		,			7
CTRY IO.	SHIP	LATITU	OE LOI	ACITUOE FE	MARSOEN	STATION TIA (GMT)	YEAR		UISE	STATION		DEPTH	DEPTH OF		WAVE RVATIONS	WEA-	CLOUD			NODC	
311209		3018	1/10 N 1.3	958 W		MO DAY HR	1/10 00 196	-	NO. 1	NUMBER		4440	S'MPL'S	28	HGT PER SE	X 6	6 8			0001	
7 31/120	1 11	3010	14 13	730 41 1	WAT		NO 1	RO-	AIR TE		VIS.	NO.	SPEC		7 7	1 ^0	1010			0001	L
					COLOR	TRANS. DIR.	SPEED ME	TER bsl	DRY BULB	MEL	COD	OBS. DEPTHS	OBSERVA	TONS							
						17		25	200	189	7	10									
	MESSENGR TIME D	CAST NO.	CARO	DEPTH (m)	T *C	s °/	SIGMA-T	521	ECIFIC VOLU	IME &	∆ 0 YN. M	SOL	JNO	O 2 ml/l	PO4-P	TOTAL-2	NO ₂ -N	NO3-N	SI 04-5		s
	HR 1/10	NO.	TYPE					+			X 10 ³	AFFC	DC1TY .		µg = et/l	µg - 01/1	ug - et/1	yg - at/1	µg = at/		C
	1	i I	SID	0000	1850	3496	2514	1	002838	2 0	000	15	179						1	1	
	200		OBS STD	0000 0010	1850 1852	34959 3496	2514 2513		002846	./. 0	028		179 181								
	200		OBS	0013	1853	34962	2513		02040			15	182								
			STD	0020	1852 1850	3496 3496	2513 2514)02849)028 47		057		183 184								
	200		OBS	0035	1849	34954	2513		,02041			15	184								
	200		ST0 OBS	0050 0057	1849 1847	3495 34946	2513 2513	C	02859	3 0	142		187 187								
	200		STD	0075	1836	3492	2514	C	002858	4 0	214		187								
	200	1	OBS STD	0087	1830 1827	34913 3491	2515 2516		002850		285		187 188								
	200	1	085	0113	1823	34910	2516		002000	0	400		189								
			STD STD	0125 0150	1744 1591	3477 3451	2525 2541		002 7 68 002621		1356 1423		166 121								
	200)	OBS	0170	1480	34354	2554						087								
	200		ST0 085	0200 T0228	1330 1212	3420 34100	2573 2589	C	002322	3 0	546		041								
	200		STO	0250	1161	3410	2598	C	002090	1 0	657		991								
	200		STD OBS	0300	1047 0959	3410 34084	2619 2633	(001901	0 0	757		958 933								
	200	,	STO	0400	0831	3405	2650	(001608	7 0	932		894								
	200)	OBS	T0449	0730	34000	2661					14	863								
																					_
CTRY ID.	SHIP	LATITU	DE LOS	NOCTR TOUTION	MARSOEN SOUARE	STATION TIN	YEAR	CP		STATION	_	DEPTH	MAX. OEPTH OF		WAVE ERVATIONS	WEA-	CLOUG			NOOC	
COOE NO.	CODE		1/10	* 1/10 E		MO DAY HR		- 1	NO. 1	NU MBER		BOTTOM	S'MPL'S	Dill	HGT PER SE	CODE	TYPE AM		-	NUMBER	-
31 1209	RT	2958	N 13	946 W	086 99		98 196		AIR TE			4206	15	25	4 4 [X1	4 1		1	0002	21
					COLOR	TRANS. OIR.	SPEED ME	RO- TER bs1	DRY	WET	COD.	NO. OBS. DEPTHS	SPEC OBSERVA	TIONS							
					COBC		10401	79	200	189	7	14									
	MESSENGR TRALE D	CAST	CARO	OEPTH (m)	7 °C	s -/	SIGMA-T		ECIFIC VOLU	IME S	A D	sol	дис	O 2 m1/L	PO4-P	TOTAL-P	NO2-N	NO3N	\$104-		S C
	HR 1/10	NO.	TYPE					^	NOMALY-E1	10/	x 10 ³	VELO	DCITY		µg - at/1	μg - ο1/1	μg = at/l	µg = a1/l	yg - al	4	C
			STD	0000	1856	3493	2510	1	002872	12 0	000	1 15	160								-
	198		065	0000	1856	34932	2510					15	180								
	198		STD	0010	1854 1854	3492 34924	2510 2510	C	002876	6 0	1029		181								
	100		STD	0020	1855	3494	2511	C	002869	5 0	1057	15	183								
	198		OBS STD	0029 0030	1855 1855	34948 3495	2511 2512	C	002867	1 0	0.86		185 185								
	198		OBS STD	0049	1856 1856	34982 3498	2514 2514		002854	2 0	143		189 189								
	198		OBS	0 0 7 3	1856	34972	2513		102074	2 0	1143		193								
	198		STD OBS	0075 0097	1855 1844	3497	2513	(002367	5 0	1215	3.0	193								
	170		STD	0100	1826	34940	2514		002850	2 0	1286		193								
	198		STD	0125 0147	1685 1569	3470 34528	2534 254 7	(002684	2 0	1356	15	148 114								
			STD	0150	1554	3451	2549	(002541	6 0	1421	. 15	109								
	198		OBS STO	0198 0200	1332 1324	34219 3422	2574 2576		502298		242		040								
			STD	0250	1139	3416	2607		002007		649	14	984								
	198		OBS STD	0295 0300	1004	34107 3410	2627 2628	(001610	1 0	745		942								
	198		OBS	0391	0814	34032	2651					14	886								
			STD	0400 0500	0795 0616	3403 3405	2654 2680		001567 001322		1914 1058		880 827								
	198		085	T0591	0501	34058	2695					1.4	795								
			STD STD	0600 0700	0496 0445	3407 3418	2696 2711		001164 001031		292		795 792								
	198		OBS	0783	0412	34258	2721					14	793								
			STD	0800 0900	0408 0386	3428 3437	2723 2732		000922 000838		478		794 803								
	198		OBS	T0979	0368	34432	2739					14	809								
			STD	1000 1100	0363 0342	3444 3446	2740 2744		000770 000735		559		811								
			STD	1200	0321	3449	2748	(00700	1	706	14	827								
			STD	1300 1400	03UC 0280	3451 3454	2752 2755		000663 000628		.774 .838		835								
	198	3	OBS	T1469	0266	34552	2758						849							1	77

REFERE		SHIP	LATITU	100	LONGITU	DE 3G	MARS	DEN	STATIO	N TI	ME	YEAR	-	RIGINA			DEPTH	MAX. DEPTH	OR	WAVE	WEA- THER	CLOUD			NODC	
	ID, NO,	CODE	LATITO	1/10		1/10 5 9	10*		MO DA		1,1/10	ILAK	CRUISE NO.		L MBER		моттом	S'MPL"		HGT PER SI	0000				UMBER	
311	209	RT	2958		13958	3 W	086					1968	N14	001	3		4390	14	27	4 5	X 5	6 6			0003	
7 1 12	20)	1 / 1	2 /) 0	, .	1000	, ",		WAT			IND	BARC	- A	IR TEM			NO.			14121	1 ^ 3	0.0	'	1	00031	
									TRANS.	DIR.	SPEED	METE	R		WET	COD!	OBS. DEPTHS		CIAL 'ATIONS							
							-	CODE		2.1	FORCE			-		-										
										21	520	17	9 22	22	211		14									
		MESSENGA TIME	CAST NO.	CAR	D DE	PTH (m)	T	°C	s •	/	SIGA	AA-T	SPECIFIC		^E ₹	∆ D YN. M.		DOLLA	03 mi/	PO4-P ug = 01/1	101AL-P	NO ₂ -N μg - ο1/I	NO ₃ -N	\$1 04-\$1 pg - 01/1	рН	S
		HR 1/10					1		-						-	x 10 ³	7000			pg - 0177	pg - 6//(pg - 01/1	μg - al/{	pg = 0171		-
							1				١	_					1									
		1.0		ST		0000		873	349		25		0028	8766	5 (000		186								
		196 196		0B3		0000		873 875	349 349		25 25							186 188								
		130)	S1		010		875	349		25		0028	8778	a (029		188								
				\$1		020		872	350		25		0028			057		189								
				S:		0030		869	350	1	25		0028			086		190								
		196	5	OB:	S (0031	1	869	350	12	25	13					15	190								
		196		083		049		871	350		25						15	194								
				S		050		871	350		25		0028			143		194								
				S		0075		871	350		25		0028	8566	5 (215		198								
		196		089		0075		871	350		25							198								
		196	5	OB:		0097		866	350		25							200								
				S		100		854	350		25		0028			286		197								
				S.		125		759	348		25		005.	1664	4 C	356		171								
		196		0B3		145		682 664	346		25		0034	, 721	0 0	424		150								
		196		OB:		1190		491	346 344		25 25		0026	5136	5 (424		145 096								
		170)	S		200		461	344		25		0024	4321	۲ (552		087								
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		190	5	083	5 T(377	0	871	340	62	26	45					14	906								
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						0500		614	340		26		001	328	3]	081		826								
		196	5	OB:)547		545	340		26							805								
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		1.0		S		700		443	341		27		0010	286	9]	315		791								
		196)	OB:		738		425	342		27		0000	0224	0 1	/.12		790								
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						1200		318	345		27		0000			722		826								
						1300		299	345		27		0000			786		835								
						1400		282	345		27		0000			848		845								
		196	5	08:		1430	0	277	345	61	27	58						848								

FERENCE Y ID.	SHIP	LATITU	OE 1/10	TONGITUDE TOO	MAR SOU	ARE	STATIO IG	MTI	¥ξ	AR C	ORIGII RUISE NO.	STATION	DN .	DEPT: TO BOTTO	DEP	TH OF		VE ATIONS	WEA- THER CODE	CLOUC CODE	5		NODC STATION NUMBE	N
11209	RT	2900	N	13953 W	086	99	02 2	1 1	96 19	968	N14 00) 4		475	5 1	4 28	3 3	4	X 1	3 5		i	000	14
						WA			INC	BARO-	AIR TE			NO	1	PECIAL	7					,	000	
						COLOR	TRANS.	OIR,		METER (mbs)	ORY BULB	BUI	T COE		0.000	RVATIONS								
								21	514	220	233	22	22 8	14			1							
	MESSENGA TIME HR 1/10	P NO.	CARC		Т	℃	\$.	/	SIGMA	_т ^s	PECIFIC VOL	UME 107	₹ △ 0 0 YN. A x 10 ³	A	DUND	02 ml/		PO4-P g - e1/1	TA L-P	NO2-N ug - 01/1	NO3-N pg - ol/l			н
			5 T	D 0000	2	004	352	2	2494	4	003026	57	0000		5225									
	197		085		2	004	352	19	2494	4				1	5225	>								
	19	7	OBS			004	352		2494						5226									
			ST			002	352		2494		00302		0031		5226									
	10-	_	ST			987	352		2498		00299	3 4	006		5224									
	19	7	085			979	352		2500		00207		000		5223									
	19	7	OBS			979	352 352		2500		00297	+ U	0091		5223 5225									
	19	(ST			976	352		2501		00297	2.6	015		5225									
	19	7	085			967	352		2502		00271.	0	015		5226									
	1,	'	51			965	352		2502		00297	2.4	022		5226									
	19	7	085			935	351		2508				0-2		5220									
	-		ST			873	350		2516		00284	5.8	029		5203									
			ST		1	716	348	2	2536		00266	74	036	6 1	5159	9								
	19	7	085		1	642	347	07	2544					1	5137	7								
			5 T		1	583	346	2	2551	1	00252	41	043	1 1	5120									
	19	7	OBS	0186	1	419	343	88	2569	9				1	5071	l								
			5 T	D 0200	1	359	343	3	2577	7	00228	43	055	1 1	5053	3								
			ST	D 0250	1	173	341	8	2602	2	00205	3 2	065	9 1	4996									
	19	7	OBS		1	093	341	30	2613	3				1	497]	l								
			ST			041	341		2621	1	00188	34	075	8 1	4956	5								
	19	7	OBS			1899	340		264						4915									
			ST			1822	340		2653		00158		093		4891									
			ST			630	340		2678		00134	50	107		4832									
	19	7	085			567	340		2685						4814									
			ST			530	340		2694		00119		120		4809									
			ST			1473	341		2709		00105	14	131		4803									
	19	7	088			1459	342		2712		0000		1/1		4803									
			ST			1430	342		2720		00094		141		4801									
		_	ST			1399	343		273		00085	42	150		4808									
	19		088			1396	343		2732					1	4809	4								
	19	1	088	13790	C	294	345	46	2755															

STOCK CALCE CALC														MAX.			_		1		
No.	FRENCE	SHIP	1 A TITLE	26	LONGITI	10E #5			STATION T				DEPTH	OEPTH		WAVE SERVATIONS				51	ATION
		COOE				1/10			MO I DAY IN				BOTTON		DIR	HGT PER S	COOL	TYPE AM	1	N	UWBEK
	209	RT	2826		14003	3 W	087	80	02 22 1	96 1968	N14 005		4750	19	29	4 4	X 1	6 6		(0005
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MISSINGE CASTO CA								COOE		PORCE				-							
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196		TIME 0	E AST			EPTH (m)	T	℃	s */	SIGMA-T	SPECIFIC VOLUM	OYN, M			02 ml/						рН
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		196	>	OBS	5	19360	C	212	34612	2767											

REFERENCE	SHIP					# E	MARS	OEN	STATIO	IT MC	ME	WF + D		ORIGIN			C	DEPTH	MAX. OEPTH	00	Wi	A VE	WEA		rono			NOOC	
CTRY 10.	1000	LATITU	1/10		GITU OE	DRIE	10°		MO D		2 1 / 3 0	YEAR	CRUIS		STATIO NUMBI		80	MOTTO	OF S'MPL'S	l.		PER SE	THER		DOES			NOITAT	
311209	DT	2955		140	103 W	-	087	1	02 2			1968	-	-			7. "	755	19			5 SE	-	_			-	000/	+
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								WA		V	SPEED	BAF		AIR TE	_	- VIS		NO. 085,	SPEC	IAL									
								COLOR	TRANS.	OIR.	FORC	11.01		ORY BULB	BUL			EPTHS	OBSERV	ATIONS									
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	MESSENGI	OF NO.	CAR		OEPTH (m)	Т	°C	ς .	/	SIG	MA-T	SPECIF	MALY-X	JME 107	SYN. A	й.	VELO		O2 m1/		PO ₄ =P	TOTAL)2-N	NO3-N	S1 O4 - S		
	HR 1/10)		`							1		1			x 10 ³		******	C111		_ '	g = a1/1	vg = at/L	1 P8	- at/l	µg = a1/1	μg - α1/	`	
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	10	_	51		0000			874	349		25		110	2901	5	0000	3	151											
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	19	7	S1 0B9		0010			874 874	349		25 25		.01.	2905	0	0029	7	151											
	19	,	SI		0020			872	349		25		0.2	2909	5	0058	2	151											
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	Io.	7	085		T0258			162	339		26	7						149	155										
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	19	7	089		0381			816	340		26							148											
			51		0400			781	340		26			1563		0923		148											
	1.0		S1		0500			537	339		26		0.0	1351	7	1059	7	148											
	19	7	089		T050			596	339		26							148											
			SI		0600			516	340		25			1181		1194		145											
	10	7	\$1		0700			448	341		27		0.0	1742	5	135		147											
	19.	/	089		T074			422	342		27		0.0	000	_	2/0		147											
			S1		0800			411	342		27			933		1406		147											
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	19	7	0B3		100			364	344		27		001	or r 1	C	12/:	,	148											
	19		SI		1100			364 341	344		27		00	720	7	165		148											
			S1		1200			318	345		27			0678		172		146											
	19	7	0B3		T124			308	345		27		0.0	JU 10	-	1,2		148											
	1 7		S 1		130			297	345		27		0.0	646	3	1786	5	146											
			S 1		1430			278	345		27			1609		1849		148											
			S 1		1500			262	345		27			587		1900		148											
			S 1		1750			228	346		27			538		2041		148											
	19	7	085		T187			216	346		27							148											
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EFERE		SHIP	LATITU	DE	LONGITUD	CTR	MARS		STATI	ON TIA		AR C	ORIGI			DEPT	Utrir		WAVE	ONS	WEA-	CLOU			NODC	
	ID.	CODE	. LAIIIU	1/10		10 8	10°		MO D			1	RUISE NO.	STAT		BOTTO	0.6	0.0	HGT PE		CODE	TÝPE A			STATION NUMBER	
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- 1	1						١ ,	WAT	ED	102	IND		AIR T	F 4 4 D	50 T	-	7		, '	1	1 `-	1010			000.	
							-	COLOR				BARO- METER	DRY	7-	V15	NO.		CIAL								
								CODE	(m)	OIR.	OR FORCE	[mbs1	BULS	91	ULB CO	DEPTH	2 ORZEKA	/ATIONS								
										27	512	176	206	1	94 7	12										
	ſ	MESSENGE					T		1			Τ.			₹ △ 0				-					1.	1	
		TIME	97 NO.	CAR		H (m)	T	,C	2	4.	SIGMA-	-T 3	ANOMALY-	CIO?	X 103	A. 100	LOCITY	02 ml/	PO4		DTA L-P	NO2-N				
	-	HR 1/10	-								-	-			X 10-	_				-					-	_
	ŀ			51	ro loc	00	20	010	350	1	2476	Ι,	203194	+7	1 2000	$_{1}$	5224		1	l			-		1	
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		196	5	089		30		387	350		2509						195									
				51		50		381	350		2511		002851		0146		197									
				S1		75		373 365	350 350		2513 2515		002868 002856		0218		5198									
		196	4	CBS		00		365	350		2515		JU200:	, ,	0290		200 200									
				S1		25		578	346		2535		002679	. 7	0359		5146									
				51		50		538	344		2549		002543		0424		5104									
		196	5	089		52		529	344		2550		0042.	, ,	0.2		5131									
				51		00		+12	343		2566		00239	79	0547		5070									
		196	5	083	5 02	04	14	00	343	03	2567						5067									
				51	D 02	50	1;	809	342	0	2597	(002102	2.7	0660	1:	8006									
				S1	rD 03	00	10	37	341	1	2621	(001876	6	0759	1 1	4055									
		196	5	089	0.3	04		25	341		2623					14	4951									
				S 1		00	_	312	340		2652		001594	9	0933	1	887									
		196	5	OBS		03		306	340		2652						+885									
				51		00		35	34)		2678		001348	-	1080		1834									
		200		SI		00		509	340		2694		001189	1	1207		1800									
		196		0B5		00		+98 +56	340		2696		201066	2	1216		+797									
				51		00		+10	342		2708 2721		001060 000931		1319		+796 +795									
		196	5	085		01		+09	342		2722	(10000	0	1410		+175 + 7 95									
		. / (51		00		389	343		2731	-	000849	R	1508		+804									
		196	5	083				369	344		2738		00004		1200		812									
				S1		00		368	344		2739		00078	6	1590		4813									
				S1	rD 11	0.0	0	347	344	6	2743		000745		1666		+821									
				51	D 12	00	0	326	344	8	2747		000708	3 1	1739		+829									
				S1	10 13	00	0:	305	345	1	2751	(000670) 4	1808	14	837									
				S 1		00		283	345		2755	(000630) 7	1873	14	845									
		196	5	085	T14	76	0:	267	345	57	2758					14	+851									

REFERENCE	SHIP				MARSOEN SQUARE	STATION TI		ORIGINATO	OR'S	OEPTH	MAX. DEPTH		WAVE		WEA-	CLOUD		1	200	
CODE NO	cons	LATITU		NGITUDE 12/10		(GMT)	YEAR		TION MBER	TO	OF		SERVATI		THER	CODES			ATION	
31120		2959	1/10	4001 W		02 26 1	99 1968		VIBER	4290	S'MPL'S		HGT PE	SEA 5		TYPE A M	1			
121450	77 61	27)7	14 1,	*001 W						4290	14	18		1 2	×1	6 3		- '	0008	
					WA		IND BAR		V15.	NO.	SPEC	CIAL								
					COLOR	TRANS, DIR.	SPEED MET OR (mb		ULB COD	OBS. DEPTHS	OBSERV	A TION S								
						27	523 08		72 8	14										
				T					_	1, 1										_
	MESSENGE TIME o	CAST	CARD	OEPTH (m)	T °C	s */	SIGMA-T	SPECIFIC VOLUME ANDMALY-X10?	₹ △ O DYN, ∧	SOL		O2 ml/	POA		TOTA L-P	NO ₂ -N	NO3-N	\$1 O4-\$i	ρН	5 C
	HR 1/10	1	1176						x 10 ³	, AETC	CIII		νg -	01/1	νg - ot/l	μg - αl/l	yg = at/l	yg - ot/l		C
					1000	0.0-	25.4			1.5.										
	100		STD	0000	1860	3490	2506	0029072	,0000		181 '									
	199		085 5T0	0000	1860	34897 3490	2506 2506	0030000	0000		181									
	199		085	0010	1861 1860	34899		0029098	0029		183									
	1 4 4		STD	0020	1859	3489	2506 2506	0029156	0058		183									
			STD	0030	1858	3488	2505	0029258	0030											
	199		085	0039	1856	34863	2505	. ,	0001		186									
			STD	0050	1814	3480	2510	0028851	0146											
	199		085	0063	1780	34747	2515				166									
			STD	0075	1779	3476	2516	0028430	0217											
	199		085	0097	1776	34770	2517			15:	171									
			SID	0100	1774	3477	2518	0028295	0288	15:	171									
			5TD	0125	1727	3470	2524	0027798	0358		160									
	190		085	0126	1724	34692	2524				160									
			STD	0150	1569	3442	2539	0026394	0426		113									
	100		085	0190	1344	34102	2563				143									
			STD	0200 0250	1295	3407	2570	0023497	0551		28									
	199		STD 085	T0253	1086 1075	3398 33972	2603 2604	0020455	0661		963									
	177		510	0300	0975	3399	2623	0018615	0.758		931									
	199		OBS	0382	0811	34006	2650	0010017	0130		883									
	*//		STO	0400	0772	3401	2656	0015528	0929		871									
			510	0500	0595	3401	2680	0013190	1072		318									
	199		0B5	T0511	0579	34014	2682	0017170	10,0		313									
			510	0600	0520	3411	2697	0011638	1197											
			STD	0700	0465	3421	2711	0010329	1306	148	300									
	199		085	T0779	0429	34279	2720			14	799									
			STD	0800	0423	3430	2723	0009256	1404	148	301									
			STD	0900	0396	3437	2731	0008506	1493		307									
			5T0	1000	0370	3443	2739	0007839	1575											
	199		085	1033	0362	34448	2741			1 48										
			510	1100	0347	3447	2744	0007351	1651											
	1.0		STO	1200	0325	3450	2748	0006944	1722		329									
	199		085	T1292	0306	34523	2752	/	. 7.6		336									
			STD	1300	0304	3452	2752	0006589	1790											
			570	1400	0286	3454	2755	0006352	1855		846									
			STD	1500	0269	3455	2757	0006122	1917		856									
	1.00		STD	1750	0232	3458	2763	0005594	2064		882									
	199		085	T1944	0211	34602	2767			140	907									

Marriage Marriage																								 	
	EFERENCE	SHIP				MARS	DEN	STATIC	IT NO					ATDR'S			DEPT		WAVE	2015				NDDC	
		CDDE			LONGITUDE	500					EAR						, DF	00							
WATER WIND STO STO CATO DEPTH STO DOT STO STO DOT DOT STO DOT DOT STO DOT DOT STO DOT				17 10	10	_				268						SMPL		HGT PER	SEA			-	 		
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Note								-	W						VIS.										
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201		HR 1/10								-				+	X 10-	+			-						H
201			1	ST	D ! 0000	1	914	350	8	2506	6	00	29069	, 10	000	115	198		1	- 1					
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		20	1	OBS	1427	Q 0	283	345	51	2756	6														

REFERENC	E SHIP					- ×	MARSOEN	STATI	ION TI	ME			ORIGIN	ATOR'		DEPTH	MAX		WA		· w	EA-	CLOUD	T		NODC	
CTRY ID.	COOE	LATITU		LONG		DRIFT	SOUARE		GMT)		YEAR	CRUIS		STATIO		BOTTON	, OF			A TION S	1 00	HER ODE	CODES		1 5	TATION	
31120		3010	1/10 N	139	1/10 53 W		10, 1,	02 2			1968	NI.	_		К	4270	S'MPL	'S DIR.		PER 5	EA		TYPE AM	1			
1 2 4 2 0	27 1	1 3010	14	100)) W	1 1					1 700	LAT				14210	1 1	20	٦١		4 X	1	0 5			0010	
								ATER	W	SPEED	BAR			MP. °C	- vis	NO.		ECIAL									
							COLO		OIR.	FORCE	t-st		DRY BULB	BULI		DEPTHS	OBSER	VATIONS									
							-		20	511	1.7	3	194	18	7 7	14			-								
							1	-		Т						1			Н-		_				,		
	MESSEN	CAST	CA'		DEPTH I	m)	τ ℃	S	٠/	SIGA	4A-1		MALY-X	JME 107	₹ △ O	A. SO	UND	O 2 m1/		04-P	ATOTA - Bu		NO2-N ug - 01/1	NO3-N	\$1 O4-Si	pH	Ĉ
	HR 1/1	0								-				-	x 10 ³				- 1	y - 0171	yy - i	777	pg = 6171	µg + a1/1	99 - 6171		
			_	TD	0.000	3	1843	347	6	24	0.0		2973	,	0000	116	174					- 1					
	0.6	1	0B.		0000		1843	347		24		Ü	2713		1000		174										
		4		TO	0010		1837	347		250		0.0	2964		0030		174										
	0.6	1	ОВ		0010		1837	347		25							174										
			S	TD	0020)	1833	34/	5	250	22	0.0	2956	4 (0059		175										
				TD	1030		1829	347		25		00	2950	2 1	1059	15	175										
	0.6	1	08.		0039		1827	347		250						15	176										
				TD	0050		1796	347		25		CO.	2873	3 :)147		16>										
	.) 6	1	OB:		005		1789	347		25							168										
		_		TD	0079		1791	348		25		- 1	2824	8	2718		172										
		1	OB:		0085		1792	348		25							174										
	37	1		TD	0100		1786	348		25.		0.0	3819	ь ;	289		175										
	0.6	1	0 B	S TD	0109		1771	348 346		25		0.0	2720	,	350		172										
				TD	0150		1689 1556	344		25			2729 2611		358		148 109										
	06	1	0B:		016		1479	343		25		0.0	2011	(, • , ,		385										
		_		TD	0200		1259	340		25		0.0	2303	1 '	548		016										
	9.6	1	0 B		0218		1168	339		258							936										
				TD	0250		1080	339		26		00.	2042	5 :	056		060										
			S	TD	0300)	0953	340	0	26,	27	0.0	1818	3 (753	14	923										
	116	1	0B:		0328		0889	340		26						14	904										
				TD	0400		0745	339		265		00	1526	4 ;	3470		860										
	0.6	1	0B:		T0445		0670	339		266							838										
				TD	0500		0608	340		268			1323		1063		823										
	0.4	,		GT	0600		0516	341		26		0.0	1166	3	187		803										
	0.6	1	OB:		T0651		0478	341		27(0.0	1020	2	207		797										
				TD TD	0700		0458	341		271			1039 1929		1297 1396		797 799										
	0.6	1	08:		0874		0396	343		27		001	1724	-	1270		802										
	0.0			a TD	0900		0390	343		27		0.0	0851	n	1485		804										
				TD	1000		0368	344		27			789		1567		812										
	0.6	1	0B:		T1096		0347	344		27							820										
				ΤĎ	1100		0346	344		27		00	0732	5	1643		821										
			S	TD	1200)	0326	344	. 9	27			0703		715		829										
			S	TD	1300)	0306	345	1	279	51	00	0673	0	1784	14	837										
				TD	1400		0287	345		279		001	0643		849		846										
				T D	1500		0269	345		279		00	0614	4	912		856										
	2.6	1	08:	S	T1659	7	0243	345	74	270	52					14	872										

REFERENCE				_ G	MARS	DEN	STATIB	N TIME			ORIO	GINATE	2.84	DEPTH	MAX.			A V E		WEA-	CLDUD			NODC	
CTRY ID.	CODE	LATITUI		LONGITUDE	SDU		{G A		YEA	.R	CRUISE	STAT		TD BOTTOM	OF	1		'ATIO		THER	CODES			UMBER	
CODE NO.			1/10 N	17.10	10			190		ó	ND.	NUA		4755	S'MPL	-		T PEH			TYPE AM	T			
311209	RT	3003	14	13953 W	122	09 (02 29	1190	196	-0	N14 C	11		4133	15	2.6			3	X 5	3 6	1	'	0011	
					[WAT	ER	WIND		BARO	A IR	TEMP.	°C VIS.	NO.	505	CIAL									
						COLOR	TRANS, E	OIR. SPEI	t "	A ETE			LE CODI	DEPTHS		ATIONS									
					}	CODE		6 SI		179			66 7	14			-								
		, ,													Щ,		<u></u>							,	_
	MESSENGE	CAST	ÇARI		1	*C	5 ./	51	GMA-	, T	SPECIFIC VI		∑ ∆ D DYN. M		JND	02 ml/		PO4-		TOTA L-P	ND2-N	NO3-N	S1 D4-51	pH	S
	HR 1/10	T NO.	TYPE			_		.		.	ANOMALY	-x10'	X 10 ³	, AETO	OCITY		1	ug - el	1/1	νg - α1/I	\lo = gu	yg = ol/1	νg - σ1/1		C
	!	' '	ST			846	3479	_	501	- '	00295	44	,0000		176		- 1		- 1			1			
	190)	OBS			846	3478		501						176										
			ST			849	3478	_	500		00296	85	0030		178										
	190		OBS			850	3478	_	500		00700		01.50		179										
			ST			846	3476		499		00298		0659		179										
	191	1	ST 085			842 838	3473	_	499		00298	083	0089		179 178										
	19.	1	51			817	3476	_	506		00292	50	0148		176										
	190	2	085			812	3476	-	508		00272		3140		175										
	2		ST			806	3480		512		00287	45	0221		177										
	190	3	085			801	3482		515						178										
			ST			798	3483		516		00284	52	0292		179										
	190	0	OBS	0115	1	794	3483	8 2	518					15	180										
			5 T	0 0125	1	728	3470	2	524		00278	321	0363	15	161										
			5 T		1	570	3442	2	520		00264	16	0431	15	113										
	190)	085			426	3420		554						069										
			5 T			269	3407		575		00230	001	0554		019										
	190)	OBS			106	3394		597						967										
			5 T			064	3397		606		00201		0662		955										
	1.04		ST		-	949	3400	_	628		00181	. 18	0758		921										
	190)	085			853 769	3401		644		00150	1.0	0926		894 870										
	190	_	ST OBS			673	3397		667		00156	010	0920		843										
	190	J	51			633	3401		675		00137	712	1073		833										
			5 T			531	3411		696		00117		1200		810										
	190	0	085			462	3418		700		0011	, , ,	1-00		797										
	170		51			457	3419		710		00103	3.8.2	1311		797										
			ST		_	415	3427	_	721		00093		1410		797										
	190	0	085			384	3433		730		31,07				801										
			ST			383	3434		730		00085	76	1500		801										
			ST			360	3441		738		00078		1582		809										
	190	0	085	T1078	0	349	3445	9 2	743					14	818										
	190	0	085	15000	0	249	3457	72 2	761																

																	,	,		
RENCE	SHIP	LATITUOS	100	NCITUO!	MAR	SOEN	STATION			IGINA.		DEPTH	MAX.	0.00	WAVE	WEA				NOOC
ID.	CODE	LATITUDE		NGITUOE	10°			HR.1/10	CRUISE NO.		ATION REER	BOTTOM	0.0		HGT PER S	0000	TYPE IAM			TATION
1209	RT	29565N	-	006 W	087	90		189 1968		012	MIDER	4572	15	3.2	5 5	X1	4 3	7.		0012
120	1	2730314	1 17	000 m	100,							7772	1 12		1717	^ 1	1 413	1		0012
						WA.		SPEED BAI	RQ-	R TEM	V15.	NO.	SPEC							
						COLOR	TRANS. DIR.	OR IME			BULB COD	DEPTHS	OBSERVA	SHOIL						
						_	07	512 25	54 18	9	161 7	14								
							-		1		1 - 1 -	1			1				1	
	MESSENG®	P C W S I	ARD YPE	DEPTH (m)	Т	°C	5 %.	SIGMA-T	SPECIFIC Y		UTN, N	300	DCITY	O2 ml/l	PO ₄ -P	TOTAL-P	NO2-N	NO3-N	SI O4-SI	pH
	HR 1/10	1	176								X 10 ³	7650	JCIII		yg - 01/1	₩g - 01/1	n8 - 01/1	μg + α1/1	pg - 01/	
			0	2000		0.05	2,00	2501	0020	201		1,0								
			STD	, 0000		885	3498	2506	0029	105	,0000		189							
	189		35	0000		885	34975 3497		0030	270	0000		189							
	3.00		STD	0010		888		2505	0029	270	0029									
	189		35	0010		888	34967 3496	2505 2506	00.30	100	0050	15								
			510	0030		874		2505	0029											
	189		STD BS	0030		870	3496 34956		0029	066	0038		191							
	10-		510	0050		849	3491	2510	0028	803	0145		186							
	189		35	0053		846	34904	2510	01120	000	(114)		186							
	10-		STD	0075		829	3490	2514	0028	563	0217		184							
	189		35	0082		821	34893	2516	0010	, , ,	0217		183							
	189			0096		800	34854						179							
			STD	0100	_	777	3481	2520	0028	075	0288		172							
			STD	0125	1	642	3456	2533	0026		0357	15	133							
		5	STD	0150	1	519	3435	2545	0025	836	0423									
	189		35	0158	1	482	34297	2549					0.85							
			STD	0200	1	308	3407	2568	0023	747	0547	15	n 32							
	189	9 OF	35	T0212	1	263	34027	2573				150	119							
			STD	0250	1	140	3405	2598	0020	891	0658	14	933							
		5	STD	0300	1	000	3406	2624	0018	512	0757	140	941							
	189	O E	35	0314	0	965	34063	2630				140	930							
		5	STD	0400	0	802	3401	2651	0015	947	0929	141	883							
	189	0.5	35	T0418	0	771	34005	2656				141	874							
		5	STD	0500	0	640	3402	2675	0013	732	1077	14	836							
			STD	0600	0	519	3407	2694	0011	922	1406	148	804							
	189	9 OE	35	T0618	_	502	34082	2697					008							
			5TD	0700		454	3418	2710	0010		1317		795							
			STD	0.800		403	3428	2723	0009	228	1416		794							
	189	0.6	3.5	0822		400	34303	2725				14	795							
			STD	000		377	3437	2733	9008		1503		799							
			STD	1000		362	3443	2730	1007	746	1583		910							
	189	9 08	35	11023	0	360	34445	2741				14	813							
	189	OF	35	15270	0	262	34564	2759												

REFERENCE	T []			₩ # H	MARSDEN	STATION TH		ORIGINA	TOR'S	DEFIN 1	MAX.	WAVE	WEA-	Cronp		1	DDC	
TINY ID.	CODE	LATITUDE		VGITUDE NO	SOUARE	(GMT)	YEAR		ATION JMBER	10	OF DIR.	HGT PER SE	THER	CODES TYPE AMI		ST N	ATION	
		1/10 30038N		952ZW		03 02 1	86 1968	N14 013	DIVIDER	4755	16 18			0		- (0012	
311500	1	20 13014	1	, , , , , ,							10 10	1 1 1 1	1	1 10		1,		
					WAT		SPEED BARD		V15.	NO. OBS.	SPECIAL							
					COLOR	TRANS. DIR.	OR (mbs		MEL CODI	DEPTHS	BSERVATIONS							
						18	\$14 24	0 194	183 7	14								
				Τ						1								
	MESSENGR TIME 0	CAST C	ARD YPE	DEPTH (m)	T *C	5 %.	SIGMA-T	ANOMALY-X10	2 DIN. M	VELOC		/1 PO4-P	TOTAL-P pg - ot/I	NO2-N µg - ot/l	ND3-N	S1 O4-S1	pН	ć
	HR 1/10		17.6						X 10 ³							-		+
		١ .	STD	0000	1866	3490	2505	0029193	1,000	1518	33			ļ		1		11
	186	OB		0000	1866	34900	2505	()() 2) 1) 3	5050	1518								
	100		STD	0010	1866	3490	2505	0029264	0029	151	34							
	186	OE		0010	1865	34895	2575			1518	3 4							
		5	CTS	0020	1865	3490	2575	0029271	0058	1518	36							
		5	CTO	0030	1864	3490	2505	0079269	8800	151	3 7							
	186	0.6	3.5	0034	1864	34898	2505			1518								
			CTS	r 550	1864	3489	2505	0029373	0146									
	186	0.5		0.354	1861	34890	2505			1511								
			STD	00.75	1822	3489	2514	0028542	0510									
	186	08		2084	1807	34858	2516			151								
			CTE	0110	1794	3482	2517	0028401	0290									
	186		B.S.	0109	1772	34773	2519	0037315	0.350	151								
			STD	0125	1653	3455	2530 2545	0027215										
	101		STO	0150	1490		2553	Dii/5711	1720	150								
	186		B5	0163	1416 1254	34154	2573	0023231	0548									
	186		STD BS	0218	1186	33954	2582	00252	() 5 - 0	149								
	100		STD	0250	1101	3399	2601	0020643	3 0658									
			STD	0300	1980	3473	2625	0018402										
	186		BS	1326	0923	34041	2635			149								
	100		STD	0400	0784	3399	2653	0015829	2 2927									
	186		BS.	T0438	0721	33986	2661			148	57							
			STD	0500	0630	3403	2677	0013524	+ 1074	148	32							
		!	STD	0500	0516	3410	2697	0011663	3 1200	148	73							
	186	01	B 5	T0647	0477	34137	2704			147								
			STD	0700	0462	3419	271^	0010441										
			STD	0800	0433	3428	2720	0009521	3 1410									
	186		85	0871	0412	34332	2726			148								
			STD	0900	0403	3435	2729	000873										
			STD	1000	0374	3447	2737	0007960	1585									
	186		B5	T1084	0351	34464	2743	0007777	15/1	148 148								
			STD	1100	0347	3447	2744	0007373										
			SID	1200	0323	3449 3451	2748 2751	n006686										
			SID	1300	0301	3451	2754	0006390										
			STD	1500	0266	3455	2757	0000390										
	186		B S	T1642	0248	34573	2761		1 1 1 1 1	148								
	100	,	03	11072	0270	57515	2.01			2 10	-							

	10.	SNIP	LATITU		LON	GITUOE	DRIFT	MARSOEN SQUARE		ATION TI	YEAR	CRU		STATI	ION	OEPTH TO BOTTO	OF	H OB!	WAVE		WEA- THER CODE	CLOUD		S.	NGD : TATION UMBER	
_	١٥.			1/10		1/10	=	10° 1°		DAY HE		+		NUM	BER		2 W.L.P	_	HGT PER	SEA		TYPE AM				
112	209	PT	3013	N	139	750 W		122 09	03	03 1	85 1968	[N]	14 01	4		4201	18	20		4	X1	3 5			0014	
		,						, V	VATER	W	INO BAR	0-1	AIR TE	MP.	°C	NO.		55141								
								COL			SPEED MET	ER	ORY	W	ET COD	200	0.0000	ECIAL VATIONS								
								CO	DE 10	1	FORCE (m)		SULB		LB		3									
										20	517 23	7	189	1	78 8	14										
		MESSENGR TIME O	CAST NO.	CAI	R D PE	OEPTH I	m)	т °С		s */	SIGMA-I		DIFIC VOLU		₹ ∆ 0 0 N N N x 10 ³	, , ,,	LOCITY	0.2 ml/l	PO4-		OTAL-P	NO2←N 1 µg + a1/I	NO3-N µg = al/l	S1 O4-S1	рН	
							. 1	105			25.01		- 20 / 1													
			. ,		TD 1	0000		185		481	2501	. 0 (02961	l.	5000		179									
		185		OB		0000		185		4813	2501	0.	2000	0	0000		5179									
					TD	0010		185		482	2501	0 (2962	9	0030		5181									
		185		08		001:		185		4816	2501		- 20 - 2	_	01.50		181									
					TD	0020		1856		481	2501		02967		0059		5182									
		1.0.			TD	0030		1850		481	2502	J (02956	0	0089		5182									
		185		OB:		0036		1845		4801	2503	~	22015	,	0.1.		5181									
		3.0.5		_	CT	0050		182		478	2507	0.6	02915	4	0148		5177									
		185		08:	-	0058		1800		4770 482	2509 2514		2860		0225		5177									
		100			10	0075						91	J 2009	~	UZZ.		5178									
		185		OB:		0089		180		4826 479	2515	0.0	2016		2201		5175									
		3.05			TD	0100		178		4720	2516 2521	0(02845	**	0291		5165									
		185		OB:		0116		169				0.0	2755	2	0361		5151									
				-	TD TD	0125		156		464	2526 2542		02614		0428		5111									
		185		0B	TD	017		1430		4261	2556	()(J 2 0 1 4	7	(1.450		5073									
		100			J TD	0200		127		410	2577	0.0	02289	5	0551		5022									
		185		0B		T023		111		3950	2596	0 '	0220,		0-01		4969									
		100	'		T D	0250		108		397	2603	0.1	02045	0	0659		4961									
					TO	0300		099		400	2621		01878		0757		4936									
		185		08		035		087		4322	2641	,	91010	C			4905									
		100			TD .	0400		078		400	2654	0.1	01572	6	0930		4875									
		185		08		T046		066		3992	2669				0-5		4839									
		10)			TD	0500		062		403	2678		01340	15	1076		4828									
				_	TD	0600		052		411	2696		01170		1201		4807									
		185		08		T068		046		4187	2700				1-5.		4797									
		100			TD	0700		045		420	2711	0	01033	3	1311	1	4798									
					TD	080		0.42		430	2722		00931		1410		4813									
					TD	0900		039		437	2731		10853		1490		4808									
		185	,	ОВ		0.9.2		039		4387	2733						4209									
		100			TD	1000		036		442	2738	0	00790	1	1581	1	4813									
					TD	1100		034		446	2744		00737		165		4819									
		185	,	OB		T115		032		4486	2747						4823									
					TD	1200		031		449	2749	0.	00691	4	1729		4826									
					TD	1300		029		451	2752		00659		1796		4833									
				_	TD	140		027		453	2755		00629		186		4842									
					TD	150		025		455	2758		00601		192		4851									
				_	TD	175		022		459	2765		00542		2065		4880									
		185		OB		178		022		4598	2765						4884									

REFERENCE	SHIP		Τ	MOCTR THOCK	MARSE	DEN	STATION	TIME	YEAR	ORIGIN			DEPTH TO	MAX. DEPTH		WAVE	WEA- THER	CLOUD			ATION	
CODE NO.	CODE	LATITUDE	/10	AGILIDE SOLLIDS	10"	1	AO DAY				TATION NUMBER		MOTTON	S'MPL'S		HGT PER SE	CORS	TYPE AM			UMBER	
311209	RT	2953		943 W	086		03 04	189	1968	N14 01	5		4572	09	30	7 3	X1	8 3			0015	
1 21/1503	1 1/1	2733	11 12	222 11 1	٦	WATE		WIND	BAR	A IP TE			NO.								001-	
						COLOR	TRANS. OI	R, SPEE	MET	ER DRY	WET	CODE	200	SPECI. OBSERVA								
					1	CODE	(m)	FOR	:E (me		BUTB											
							3	2 51	8 26	4 172	150	8	12									T
	WESSENGE	CAST	CARO	DEPTH (m)	7	°c	s °/,,	. S10	T-AM	SPECIFIC VOLU		E A D	sou) z m1/l	PO4-P	TOTAL-P	NO2-N	NO3-N	5104-51	рН	S
	TIME O	NO.	TYPE							ANOMALY-X		x 10 ³	VELO	CITY		μg - σ1/1	µg = 0!/1	µg = a1/1	yg = a1/1	pg = 01/l		C
																				ļ		11
		, ,	STD	0000	18	342	3480	2	503	002936	9 (0000		175								
	189		085	0000		342	3479		503					175								
			STU	0010		344	3481		503	002939	2 (0029		177								
	189		035	0010		844	3480		503 503	002943	2 (0059		177 179								
			STD	0020		344 844	3480 3480		503	002943	_	0088		180								
	189	,	STO OBS	0030		844	3480		503	002771	, ,	,000		180								
	109		510	0050		817	3479		509	002899	4 (0147		176								
	189)	085	0050		817	3479		509				15	176								
			STD	0075	18	802	3480	2	513	002865	1	0219	15	175								
	189		085	0081	18	800	3480	9 2	514				15	176								
			STD	0100	18	802	3483	2	516	002850	6 (290		180								
	189		OBS	0105		802	3483		516					181								
			STD	0125		677	3460		528	002738		360		144								
			STD	0150		531	3436		543	002601	. 0 1	0427		100								
	189)	OBS	0150 0200		531 270	3436		543 572	002335	. 7	0550		019								
	189	1	STD	T0200		270	3402		572	00233.	, ,	0000		019								
	107	7	STD	0250		103	3405		605	002023	7	0659		970								
			STD	0300		961	3405		630	001794		0755		926								
	189)	085	0303	0	953	3405		631				14	924								
			STD	0400	0.	752	3400	2	658	001529	90	0921	14	863								
	189	9	OBS	T0402	0	748	3399	5 2	658				14	862								
			STD	0500	0	637	3405	2	678	00134	70	1065		835								
			STD	0600	0	545	3412	2	695	00116		1191		815								
			STD	0700	_	472	3420	_	709	001048	8 8	1303		803								
	189	7	OBS	0744		447	3424		716					801								
			STD	0800		421	3430		723	00092	32	1402		800								
	189	9	OBS	10861	0.	399	3435	/ 2	730				14	802								

EFERE	NCE	SHIP			- e	MARSDEN	STATION TI		ORIGINATO	OR'S	DEPTH DEPTH		WAVE	WEA				NOOC
		COOE	LATITUE		FDGE 1/10	SOUARE	(GMT)	YEAR	CRUISE STAT		OF OF	1	RVATIONS	THER		1		NUMBER
-				1/10	1710	10" 1"	MO OAY H	1	+		SMIFL	DIR	HGT PER SE	^	ITPE AM	7	-	
3 1 1	209	RT	29491	BM 13	39556W	- 1	03 05 1				206 14	28		2 X2	6 8	1	1	0016
						WA	_	SPEED BAR		vis.		CIAL						
						COLOR	TRANS. OIR.	OR (mb		ULB CODE	DEPTHS OBSERV	ATIONS						
							21	504 26	4 189 1	44 8	13							
	Е		тт					1		1			1				Į.	1
	"	MESSENGR TIME C	LCAST V NO.	CARO	@EPTH (m)	τ 1℃	\$ *4.	SIGMA-T	ANOMALY-XID?	SAD OYN. M.	VELOCITY	O2 ml/l	PO4-P	TOTA L-P	NO2+N NO2+N	NO3-N		
	H	HR_1/10					ļ			x 10 ³	PELOCIII		pg - 01/1	μg = 0171) g = 0171	μg = e1/l	μg = 01/	1
																		1
				STD	0000	1849	3487	2507	0028991	0000	15178							
		186		035	0000	1849	34872	2507			15178							
		186		OBS	0009	1852	34870	2506			15180							
				STD	0010	1852	3487	2506	0029110	0029	15180							
		186		STD	0020 0028	1852	3458	2507	0029108	0058	15182							
		100)	OBS STD	0030	1852 1852	34878 3488	2507 2507	0030130	0007	15183							
		186		035	0030	1851	34877	2507	0029120	0087	15183 15186							
		100	1	STD	0050	1851	3488	2507	0029175	0146	15186							
		186	,	085	0072	1853	34879	2507	0027113	0140	15191							
			,	STD	0075	1848	3487	2507	0029233	0419	15189							
		186	1	OBS	0095	1805	34816	2514	002,233	0-17	15180							
				STO	0100	1786	3478	2516	0028503	0291	15175							
				STO	0125	1690	3462	2527	0027537	0361	15148							
		186)	088	0145	1612	34499	2535			15126							
				STD	0150	1592	3446	2537	0026602	0428	15121							
		186	,	08\$	T0196	1404	34202	2558			15065							
				STD	0200	1381	3419	2562	0024304	0556	15058							
				STD	0250	1132	3410	2604	0020382	0667	14980							
		186)	OBS	2287	2990	34050	2625			14935							
		104		STD	0300	0959	3404	2629	0017985	0763	14926							
		186		085	10378	0795	34000	2652	0015065	000	14876							
				STD	0400	0758	3401	2658	0015303	0930	14866							
		100		STD	0500	0614	3405	2681	0013164	1072	14826							
		186	>	OBS STD	T0560 0600	0548 0523	34085 3412	2692	0011601	1101	14810							
				SID	0700	0465	3421	2697 2711	0011601	1196	14807							
		186		085	0741	0444	34249	2711	0010329	1506	14800							
		186		OBS	11405	0275	34553	2757			14799							
		100	,	000	11400	0213	ファフンン	2131			14042							

EFERENCE	SHIP			E	MARSDEN	STATION TH	ME		NATOR'S		OEPTH	MAX. OEPTH	Onti	WAVE	WEA-	CLOUD			ODC	
TRY IO.	COOE	LATITU	1/10 LOF	* '1/10	SOUARE 10" 1°	MO DAY HE	YEAR	CRUISE NO.	STATION		0170	OF MPL'S		HGT PER SI	CODE	TYPE AM	-		LWBEK	
311209	DT	3003					93 196		17		755	19		3 4	x1	6 7			0017	
2 111 5 0 2	10.1	3003	14 [12	24TOW	WAT		INO. T		EMP. °C	T	NO.			2171	1 11	1 0 7	1	- 1	00171	
					COLOR	TRANS. DIR.	SPEED ME	TER DRY	WET	CODE	200	SPECIA SPECIA								
					CODE	Im I	FORCE [m	bs) BULB	BULB		-									
						26	518 2	20 194	16	1 8	14							1		
	MESSENGR TIME	CAST	CARO TYPE	DEPTH (m)	т *с	5 %	SIGMA-T	SPECIFIC VOI		ξ Δ Ω NYN. M.	SOUN) 2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	\$104-\$1	рН	s c
	HR 1/10	NO.	1172					AROMALI		X 10 ³	VELOC	JII T		μg = 01/1	νg = α1/1	μg = at/l	yg = 01/1	yg - a1/1		lc l
											}									
			ST0	0000	1834	3481	2506	00290	92 (0000	151									
	193	3	085	0000	1834 1836	34809 3481	2506 2506	00291	(0)	0029	151 151									
	193		STD 085	0010	1836	34812	2506	00291	68	3029	151									
	7.43	,	STD	0020	1837	3481	2506	00292	08 (0058	151									
			STD	0030	1836	3481	2506	00292		1088	151									
	193	3	085	0037	1834	34811	2506	00272		3 - 0 0	151									
			STD	0050	1830	3481	2507	00291	57	0146	151	80								
	193	3	085	0061	1823	34803	2508				151	79								
			STD	0075	1811	3480	2511	00288	70	0218	151	78								
	193	3	055	0093	1781	34794	2518				151									
			STD	0100	1766	3476	2519	00281	82	0290	151									
	193	3	OBS	0122	1700	34645	2526				151									
			STD	0125	1681	3461	2528	00274		3159	151									
			ST0	0150	1532	3434	2541	00261	84	0426	151									
	193	3	OBS	0183	1352	34101	2561				150									
	101	,	STD	0200	1263	3406	2576	00229	60	0549	150									
	193)	085 STD	T3244 0250	1067 1052	33978 3398	2606 2609	00198	71	0656	149									
			STD	0300	0934	3399	2629	00179		0751	149									
	193	3	085	0371	0790	34001	2653	001.7			148									
			STD	0400	0741	3400	2660	00151	26	0916	148	59								
			STD	0500	0601	3400	2679	00133	42	1058	148	20								
	193	3	OBS	T0501	0600	34003	2679				148									
			STD	0600	0523	3413	2698	00115		1183	148									
			STD	0700	0460	3424	2714	00100	47	1291	147									
	193	3	OBS	T0753	0433	34291	2721				147									
			STD	0800	0418	3433	2726	00089		1386	147									
			STD	0900	0388	3439	2734	00082		1472	148									
	193	3	STD	1000 1009	0361	3445 34453	2741 2741	00075	86	1551	148									
	19.	2	OBS STD	1100	0339	3449	2746	00071	1.0	1625	148									
			STD	1200	0318	3452	2751	00067		1694	148									
	193	3	OBS	T1270	0304	34544	2754	00007	. /	/ 4	148									
	- / .		STD	1300	0298	3455	2755	00063	49	1759	148									
			STD	1400	0281	3456	2757	00061		1822	148	44								
			STD	1500	0265	3457	2760	00059	14	1882	148	54								
			STD	1750	0232	3460	2765	00054	47	2024	148	83								
	193	3	OBS	T1906	0217	34616	2767				149	03								

ERE	NCE					- 40	AA A I	RSDEN	STAT	TION TIM	E			ORIGIN	ATOR	2,	DEPTH	MAX		WAV	F	WEA-	CLOUD	T		NODC
T	10	COOE	LATITU	DE 1/10	LONGITU	DRIFT INDCTR	10°	UARE 1°		CAY HR	Υ	re ar	CRUI	SE :	STATION	NC	TO	DEPTI	1	SERVA		THER	CODES		S .	TATION LUMBER
,		11.7	2057									0/0								11						
ΤĮΙ	. 209	RT	2957	M }	13944	W	086					968	N1				4700	15	30	4	4	X1	3 6	1	- 1	0018
								WA.	_	1 1	SPEED	BARO		AIR TE		VIS.	NO.	SP	ECIAL							
								COLOR	TRANS.	OIR.	FORCE	METE (mbs		DRY BULB	BU		DEPTH	OBSER	VATIONS							
										29	512	201	0	200	1	78 7	14									
		MESSENGI	1		_		T-		'	-				IFIC VOLL	-	₹ Δ D	-	L. L.		100						
		TIME	or NO.	CAR		TH (m)		1 °C	2	٠/٠.	SIGMA	A-T	AN(DM ALY-X	107	X 103		LOCITY	O2 m1/			OTA L-P	NO ₂ -N νg - αl/l	NO3-N yg - al/l	SI O4-SI	p₩
	-	HR 1/10	1				+-		+	-		-				× 10	+-			+-						
			1 1	ST		000	١.	1846	3/	84	250	۱ ا	0.0	2912	2	0000	1,	5176		-	- 1					1
		18	_	0BS		000		1846		844	250		00	12712		0000		5176								
		18		0BS		008		1848		850	250							5178								
		10	7	S 1		010		1847		85	250		0.0	2914	6	0029		5178								
				ST		020		1844		85	250			2910		0058		5179								
				5 T		030		1841		85	250			12910	-	0087		5180								
		18	5	089	-	031		1841		850	250		00	12700	0	0007		5180								
		18		0B3		049		1839		840	250							5182								
		10)	\$1		050		1838		84	250		0.0	2912	2	0146		5182								
				S1		075		1813		86	251			2849		0218		5179								
		18	5	OBS		076		1812		858	251			72047	0	0210		5179								
		18		OBS		098		1805		858	251							5181								
		10.	,	S1		100		1791		83	251		0.0	2825	7	0289		5177								
				ST		125		1632		54	253			2682		0357		5130								
		18	5	035		146		1516		343	254		0 (, 2002	. =	0001		5095								
		10	~	SI		150		1498		31	254		0.0	2568	16	0423		5089								
		18	5	089		196		1303		071	256		•	, _ , 0 0	, ,	0.23		5030								
				ST		200		1288		07	257		0.0	02335	5	0546		5026								
				51		250		1115		07	260			2031		0655		4974								
		18	5	089		297	(0974	34	065	262							4931								
				ST		300	(0966	34	06	263		0.0	1795	2	0750		4928								
		18	5	QBS	TO	391	(0757	34	000	265							4864								
				ST	0 0	400	(0743	34	00	266	0	00	1513	9	0916	1	4860								
				SI	0 0	500	(0604	34	04	268	1	0.0	1309	2	1057	1	4822								
		18	5	OBS	. 0	590	(0514	34	076	269	5					14	4801								
				ST	0 0	600	(0509	34	09	269	7	0.0	1165	1	1181	1	4800								
				ST		700	(0466	34	20	271	0	00	01041	5	1291	1	4801								
		18	5	OBS	0	790	(0431	34	290	272	1					1	4802								
				ST		800	(0428	34	30	272		00	0931	5	1390		4803								
				ST	O C	900	(0396	34	37	273	1	00	0850	15	1479	1	4807								
		18	5	OBS	TO	992	(0369	34	429	273	9					1	4812								
				ST		000	(0367	34	43	273		0.0	00779	7	1560		4812								
				51		100		0340		46	274			00735		1636		4818								
				51		200	(0317	34	48	274	8		00696		1708		4825								
				ST	D 1	300	(0296	34	51	275	2	0.0	0659	1	1776		4833								
				ST	D 1	400	(0277	34	54	275	6	00	00623	12	1840	1	4842								
				SI	D 1	500	(0262	34	57	275	9	00	00591	.5	1900	1.	4853								
		18	5	OBS	T1	513	(0260	34	568	276	0					1.	4854								

																_				-				
FEREN	ICE			T		- E	MARSDEN	STATIO	NIT NO			ORIGINA	ATOR"	5	OEPTH	MAX.		WAVE SERVATIONS	WEA				NODC	
Y	10.	CODE	LATITU		ONGITUDE	DINFT	SOUARE		MTI	YEAR	CRU!		TATIO		TO BOTTOM	0.0		HGT PER S	COD				UMBER	
IE I	NO.			1/10	1/10	-	10" 1"	MO D	AY HR.		1	_		^		13 MILE		1			1			
11	209	RT	2952	N 1	3940 W	1	086 99	03 0	8 1	87 1968	N1				3658	18	33	4 4 4	X1	8 7		ļ	0019	
							WA	TER	WI	NO BAR		AIR TEA	_	- VIS.	NO.		CIAL							
							COLOR	TRANS.	DIR,	OR Imb		DRY BULB	WE1		OBS. DEPTHS	OBSER	ZHOITAV							
							CODE	(11.7		TORCE	-	_												
									33	\$13 22	0	211	19	4 8	14	L.,								
	[,	MESSENGR	CASI	CARO	D 50711		T *C		·/	SIGMA-T		FIC VOLU		₹ △ D DYN. M.		UND	02 ml/	PO4-P	TOTAL-		NO3-N	SI O4SI	рН	S
	- 1	TIME HR 1/10	약 NO.	TYPE	DEPTH	(m)	, ,	,	***	310 m A = 1	ANG	MALY-X1	2,	x 10 ³	VEL	OCITY		yg - a1/1	yg • 01/	pg = at/	μg = a1/l	μg = αI/I		C
	ł	HX 1/10	+					-																
	- 1		1	STE	000	10	1852	348	16	2505	00	2914	9	0000	1 15	178		1		'	•			
		18	7	OBS	000		1852	348		2505					15	178								
				ST	001	0	1854	348	16	2505	0.0	2922	3	0029	15	180								
		18	7	OBS	001		1855	348		2505					15	181								
				STO			1855	348		2505	0.0	2925	2	0058	15	182								
				STI			1854	348	37	2505	0.0	2924	7	0088	15	184								
		18	7	OBS	003		1854	348		2506					15	185								
			,	ST	005	0	1854	348	8 8	2506	0.0	2922	0	0146	15	187								
		18	7	OBS	005	9	1854	348	384	2507					15	189								
				ST	007	75	1832	348	37	2511	0.0	2885	2	0219		185								
		18	7	OBS	009	0	1804	348	334	2515						179								
				STI	010	0 (1784	348	30	2518	0.0	2831	1	0290		5174								
		18	7	OBS	011		1737	34		2524						162								
				STI			1684	346		2528		2740		0360		147								
				ST			1539	343		2543	0.0	2604	2	0427		103								
		18	7	OBS	017		1403	341		2557			_	0 - 1 0		061								
				STI			1246	340		2579	00	2264	O	0548		963								
		18	7	OBS	T023		1098	339		2599	0.0	1987	1	0655		+951								
				ST			1052	34(_	2609 2629		1794		0749		4919								
		18	-	172 260	D 030		0852		223	2645	00) 1 7 7 4	0	0147		4893								
		10	1	ST	-		0739	340		2660	0.0	1510	4	0914		4858								
		18	7	035			0644		996	2672	0.0	71710		0,1,		+830								
		10	1	ST			0600	340		2682	0.0	01305	5	1055		4820								
				ST		-	0512	34		2699		01139		1177		+802								
		18	7	085			0458		204	2711						4794								
		10		ST			0452			2713	00	01009	9	1285	14	4795								
				ST			0421	34		2723	0.0	00923	2	1382	1	4800								
				ST			0391	34	37	2732	0(00844	8	1470) 14	4805								
		18	7	085		16	0387	34	383	2733					14	4806								
				ST		00	0365	34	43	2739	0 (00778	1	1551	. 1	4811								
				ST	0 11	00	0340	34	49	2746	0 (00712	2	1626		4818								
		18	17	OBS	Tll	51	0328	34	508	2749						4822								
				ST	D 12	00	0317	34	52	2750		00674		1695		4826								
				ST			0297			2753		00647		1761		4834								
				ST			0278			2756	-	00620	-	1824		4843								
				ST			0262			2759		00596		1885		4853								
				ST			0231	34		2764	0.0	00547	2	2028		4882								
		18	17	OBS	T17	68	0229	34	596	2765					1	4884								

TABLE XI. Observed and interpolated oceanographic data for stations taken by USCGC PONT-CHARTRAIN at Ocean Station NOVEMBER, 10-31 March 1968, prepared from NODC Listing No. 31-1249 PW.

											1						1			
REFERENCE		_ = MAR	SOEN	STATION TIM	E		ORIGIN			OEPTH	MAX.	OR	W A	ATIONS	WEA-	CLOUO		57	ATION	
SHIP LATITUO	LON	GITUOE JOUTE	JARE	(GMT)	YEA	10 K		MOITAT		TO BOTTOM	S'MPL"			PER SE	CODE	TYPE A M		NI	JMBER	
CODE NO. CODE .	1/10	· 1/10 = 10°	1" /	MO DAY HR.				40 wat	-		+		-						0001	
311249 PW 2959	N 13	955 w 086	99	03 10 0	09 19	68 N				4114	15	15		1 1	2 X1	6 3		1 '	0001	
			WAT	ER WI		BARO-	AIR TE		VIS.	NO.		CIAL								
			COLOR	TRANS. OIR.	OR	(mbs)	ORY BUL8	BULE		OEPTHS.	OBSERV	ATIONS								
			COOE		FORCE		104	16	1 7	14			1							
				13	512	261	194			1.4			┿-			Ι		610 C		5
MESSENGE CAST	CARO	OEPTH (m)	т 10	5 %.	SIGMA-	_T SPE	CIFIC VOLL	1 100 E	Z ∆ O		OCITY	0 2 ml/		PO4-P	TOTAL-3	NO2-N µg - al/i	NO3-N yg - ai/l	\$1 O4→\$1 µg ~ a1/1	pН	CC
TIME OF NO.	TYPE	OEFTIS WITH				^		_	x 10 ³	1	00111									+
HX 17.10															ļ	1]	l	Į.	11
1 1	STD	0000	1850	3480	2501	r	02953	30	0000	15	177									
0.09	085		1850	34801	2501	1					177									
007	STD		1840	3480	2504	4 (002934	+8	0029		176									
009	OBS	0010	1840	34798	2504						176									
007	STD	0020	1833	3480	2505	5 0	002922	2.2	0059		175									
009	OBS	0029	1827	34795	2507						175									
	STO	0030	1826	3479	2507		002914	41	0088		5175									
009	085	00.0	1819	34786	2508				0.1		5176									
	STO	00-0	1819	3479	2508		00290	/ 1	0146		5176									
009	OBS		1819	34787	2508		00300	10	0219		5179									
	STO	0075	1814	3478	2509		00290	19	0215		5168									
009	OBS	0096	1768	34727	2510 251		00283	30	029		5164									
	STO	0100	1754	3470 3452	252		00274		0360		5136									
0.00	STD	0125 0147	1548	34367	2541		002,7		0.0		5105									
009	08S STD	0150	1527	3434	254		00260	78	042	7 19	5099									
009	085	T0198	1240	34046	257					1	5009									
309	STD	0200	1234	3405	258	0	00225	18	054	9 1	5007									
	STD	0250	1093	3406	260	8	00199	96	065		4966									
009	OBS	0295	0984	34070	262				-		4934									
557	STD	0300	0974	3407	262		00180	09	075		4932									
009	085	0392	0806	34013	265				003		4883									
	STD	0400	0790	3401	265		00157		091		4878 4829									
	STD	0500	0622	3403	267	0	00134	55	106	-	4829									
009	085	T0589	0519	34035	269		00170	2.1	119		4802									
	STO	0600	0515	3405	269 270	_	00120		130		4804									
	STD	0700	0475	3418	270		00100	, ,	100	_	4806									
009	085	0781	0445	34259 3428	272		00095	8.2	140		4807									
	STD	0800	0438				00087		149		4809									
	STD	0900	0402	3435 34387	272		0000	2 2	177		4812									
009	085	10977	0376	34551	275															
009	OBS	1455Q	0212	J-771	213	- 1														

REFERENC	E SH	-IIP			- #	MARS		STAT	ION TI	ME		T	ORIGIN	ATOR"	;	DEPTH	MAX		WA	VE		WEA-	CLOUD	_			1
CODE NO	· Ico		LATITUI		ONGITUDE SOUTIDAD	SOU	ARE	1	GMTI		YEAR	CRUISI	9	OITATE	N	10	DEPT	1 0	DESERV	ATIONS		THER	COOES			NODE	
	\rightarrow	-		1/10	7,10	10"	1"	MO C	DAY H	8,1/10		NO,	- 1	VU M B1	R	BOTTOM	S'MPL	°S DIR	HGT	PER S	EA (CODE	TYPE A MI			NUMBER	
31 12	49 P	W :	3005	N 1	.3952 W	122	09	03	10	197	1968	NIS	00	2		4846	14	1	7		3	хl	6 4			0002	
							WAT	ER	V	INO	BARG)- L	AIR TE	MP. °C		NO.			٦'		- 1		0,4	·	- 1	0002	1
						-	COLOR	TRANS.	OIR.	SPEED	METI	R	DRY	WEI		200	OBSER	ECIAL VATION	s								
						-	CODE	00.1		FOPC!	Imbs	1	ULB	BULI		DEFINS											
									18	518	23	4 2	28	20	6 7	14											
		SENGR	CAST	CARD	DEPTH (m)	١,	*c	١.	. /			SPECIFI	VOLU	M.F.	₹ △ 0	501	DNC		Ť.	O4-P						.	7,
		1/10 T	NO.	TYPE	OFFIN (m)	,	C	,	*/	SIGN	T-AA		ALY-X1		X 10 ³		CITY	03 m		g = a1/1		A L - P	NO2-N µg - qt/l	NO3-N pg - ql/l	51 O4-		c
								_		-				-					-			-	-	-			-
	- 1	1	- 1	STD	0000	ا 1 د	334	348	2 2	25	00	000	000	_	0000	1.5			1			- 1	-			1	
		197		085	0000		334	348		25		002	893	9	0000		173										
		197		OBS	0008		331	348		25							173										
				STD	0010		330	348		25		0.00	887	1	0029		173 173										
				STD	0020		328	348		25			885		0058		174										
		197		OBS	0027		327	348		25		002	000		0000		175										
				STD	0030		327	348		25		002	885	0	0087		176										
		197		OBS	0043		327	348		25		002	00)	,	,,,,,		178										
				STD	0050		325	348		25		002	885	7	0144		178										
		197		OBS	0067		21	348		25			002	,	<i>,</i>		180										
				STD	0075	18	303	348	31	25	14	002	860.	2	0216		176										
		197		OBS	0085	17	73	347	779	25	19						168										
				SID	0100		89	346	4	25	28	002	729	0 1	286		144										
				STD	0125		77	344		25	41	002	612	9 1	353		112										
		197		OBS	0127		69	344	159	25	42					15	110										
				STD	0150		16	344		254		002	540	8 -	0417	150	096										
		197		OBS	T0169		58	343		25						150	080										
				STD	0200		83	342		258			223)536	150	026										
		197		085	0250		72	340		260		002	001	5 (1642		958										
		171		510	0251 0300		69	340		260				_			957										
		197		OBS	T0329		75	340		262		001	817	5 (737		932										
				STD	0400		85	340		263		001	E 2 C	,			917										
		197		085	0491		49	340		265		001	530	4 (905	- '	877										
				STD	0500		41	340		26		0.01	3375		048		839										
				STD	0600		57	341		269			1882		174	148											
		197		OBS	0668		09	341		270		001	100	۷.	1/4												
				STD	0700		90	342		270	-	00.1	0560	ή.	287	148											
				STD	0800		38	342		272			9508		387	148											
		197		085	T0858		11	343		272		000	9,000	٠.	. 201	148											
				STD	0900		93	343		273		000	8545	5	477	148											
				STD	1000		56	344		273			7824		559	148											
				SID	1100		28	344		274	_	000			634	148											
				STD	1200	03	07	344	9	274			6809		704	148											
				STO	1300	02	94	345	2	275	53		6502		771	148											
	1	197		OBS	11357	02	90	345	28	275	54				_	148											

REFERENCE CIRY 3D.	SHIP	LATITUOE	LON	GITUOE	M AR	ARE	STATION TIM	YEAR	CRUISE	NATO	ON	OEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	OBSE	WAVE RVATIONS	WEA- THER CODE	CLOUD		5 T	ATION JMBER	
CODE NO.	COOE	* 1/	10	1/10	2 10"	1" A	MO DAY HR.	1/10-	NO.	NUM	BEK		2 WALE 2								
31124	9 PW	300271	13	9524W	122	09 0	03 11 1	79 1968		03		4755	18	291		3 X1	1516	I	- 1	0003	
1 311124	SI CM I	2002 11	1 1 2 2	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	WAT	ER WI		AIR T	EMP.	VIS.	NO.	SPE	CIAL							
						COLOR	TRANS. DIR.	SPEED MET		BU		OBS. OEPTHS	OBSERV	ATIONS							
						CODE	ţm1	FORCE (mt		+ -		-	-								
							29	520 1	86 189	1	72 7	14	<u> </u>								T.
	MESSENGR		CARO					SIGMA-T	SPECIFIC VO	LUME	₹ A D		ONU	O 2 ml/1	PO4-P	TOTAL-P		NO3-N	SI O4-Si ug - at/l	pН	Ĉ.
	TIME 0	CAST NO.	TYPE	OEPTH (m	1	°C	s */	SIGMA-I	ANOMALY-	X107	x 10 ³	, AET	OCITY		µg - 01/1	μg - α1/3	иg = at/l	µg - 01/1	pg = 0171		1
	HR 1/10																				11
					١.		1	2508	00289	21	0000	15	174								
			STD	0000		837	3484 34841	2508	00209	51	0000		174								
	179	1	DBS	0000		1837 1836	3484	2508	00289	155	0029		175								
	. 7.0		STD	0010		1836	34840	2508	0000				176								
	179	1	OBS STD	0014		1836	3484	2508	00289	81	0058	1 1 5	177								
			STD	0030		1834	3484	2508	00289		0087	7 15	178								
	179	,	085	0037		1832	34835	2509				15	5178								
	119	,	STD	0050		1826	3483	2509	00289	946	0145	5 15	5179								
	179)	OBS	0059		1820	34820	2510					5178								
	115	7	STD	0075		1803	3482	2515	00284	+96	021		5176								
	179	,	085	0090)	1786	34826	2519					5173								
			STO	0100)	1728	3472	2525	00279	96	028		5157								
	179	9	085	0118	3	1629	34550	2535			0.15		5128								
			STO	0125	5	1600	3451	2539	0026.		035		5140								
			STD	0150)	1492	3438	2553	0025	349	041	-	5088								
	179	9	OBS	017		1365	34250	2570	1	7.0.5	053		5050 5005								
			STD	0200		1225	3413	2589	0021	130	000		4951								
	179	9	OBS	T0234		1059	34010	2610	0019	24.2	063		4943								
			STD	0250	-	1030	3401	2615 2630	0017		073	-	4919								
			STD	030		0942	3402 34028	2645	001	0 0 0	0.5	_	4896								
	17	9	085	035	_	0857	3404	2657	0015	386	089		4874								
			STD	040		0779	3404	2671	0012	-190			4852								
	17	9	085	T045		0651	34092	2679	0013	392	104		4841								
			STD	050		0554	3415	2696	0011		116		4819								
			STD	070		0479	3421	2709	0010		127	_	4806								
	17	0	085	T070		0475	34210	2710					4806								
	1.1	,	STD	080		0435	3430	2721	0009		137		4805								
			STO	090		0398	3438	2732	0008	456	146		4808								
	17	9	OBS	093	8	0386	34401	2735					4809								
			STD	100	0	0370	3443	2739	0007		154		4813								
			STD	110	0	0347	3447	2744	0007	351	162		4821								
	17	9	085	T117	3	0330	34493	2747					4826								
			STD	120	0	0324		2748	0006		169		4828								
			STD			0303		2752	0006				4836								
			STD			0284		2755	0006				L4845 L4855								
			STD			0266		2758	0000			-	14833 14881								
			STD			0228		2765	0005	400	20:		14888								
	17	9	OBS	T180	19	0220	34609	2766					4000								

REFEREN	NCE	SHIP			=======================================	MARSOEN	STATION TI			VATOR'S		DEPTH DEP	W	WAVE	WEA-	CLOUD			OBC	
TRY	ID.	CODE	LATITU		NGITUDE HE	SOUARE	(GMTI	YEAR		STATION	81	0	F	SERVATIONS	THER	CODES		\$1 N1	ATION UMBER	
001	NO.			1/10	1/10 =	10" 1"	MO DAY H			140 MBCK	-	13 mr	LS DIR	HGT PER SE	<u>^</u>	TYPE A.M.1	-			
311	249	PW	3000	N 13	19545W	122 09	03 13 1				4	389 1	4 32		6 X 1	166			0004	
						WA	-	IND BA	RO+	MP. °C	VIS.		PECIAL							
						COLOR	TRANS, DIR.	OR IM		BULB		DEPTHS OBSE	RVATIONS							
							22	FORCE		122	7	1.6								
			T .				33	S15 2	40 161	133		14								
		MESSENGR TIME	CAST	CARO	OEPTH (m)	I C	s */	SIGMA-T	SPECIFIC VOL	UME DY	Δ D.	VELOCITY	O2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	5104-51	рΗ	C S
		HR 1/10	T NO.	lire						Х	103	VELOCITY		µg + α1/1	μg = qt/l	μg - α!/l	μg - at/l	yg - a1/1		c
		'		STO	0000	1816	3481	2511	00286	31 00	000	15167								
		186	5	085	0000	1816	34814	2511				15167								
		186	5	085	0009	1813	34819	2512				15168								
				STD	0010	1813	3482	2512	00285		129	15168								
				STD	0020	1812	3482	2512	00285	76 00)57	15169								
		186		085	0027	1811	34815	2512	00.101	10 0	2.2.6	15170								
		1.0		STO	0030	1811	3482	2512	00286	10 00	36	15171								
		186	5	OBS	0046	1812	34815	2512	00207	0.7 0.		15174								
				STD	0050	1813	3482	2512	00287	0.	L43	15175								
		186	5	085	0070	1815 1810	34815 3481	2511 2512	00287	7 0	415	15179 15178								
		104		0BS 0BS	0075	1776	34791	2512	002071	01 04	-10	15170								
		186	>	STD	0100	1743	3474	2523	00277	os n:	286	15161								
				STD	0125	1630	3455	2535	002670		354	15129								
		186	5	OBS	0142	1556	34444	2544	002011	0.		15108								
			•	STD	0150	1522	3439	2547	002560	08 04	19	15098								
		186	5	OBS	0191	1355	34181	2567				15048	3							
				STD	0200	1315	3416	2573	00232	24 05	41	15036								
				STD	0250	1119	3406	2603	00204	45 06	50	14975								
		186	ó	085	0285	1011	34026	2619				14942								
				STD	0300	0981	3403	2625	00184	18 0	748	14934								
		186	5	OBS	T0378	0839	34033	2648				14893								
				STD	0400	0806	3404	2653	00157		919	14885								
				STD	0500	0672	3409	2676	00136	49 10)66	14850								
		180	5	085	T0570	0593	34123	2689				14830								
				STO	0600	0562	3414	2694	00119		194	14823								
		1.0		STD	0700	0476	3421	2710	00104	02 1.	06	14805								
		186	0	OBS STD	0757 0800	0439	34252 3429	2717 2722	00093	65 14	+05	14800								
					0900	0396	3429	2731			+94	14802								
		186		STO OBS	0900	0396	34411	2736	00085	00 1	74	14807								
		100	,	STD	1000	0369	3443	2738	00078	50 15	576	14813								
				STO	1100	0344	3446	2743	00073		552	14820								
				STO	1200	0322	3449	2748	00069		724	14827								
				STD	1300	0302	3452	2753	00065		792	14836								
				STD	1400	0284	3456	2757	00061		356	14845								
		186	5	QBS	T1431	0279	34566	2758	00001	01 10	200	14849								
		101	,	003	11421	02/7	54700	2170				1-047								

ERENCE							DC11 T	F1 A T11	DAY TIES	. T			ORIGINA	TOP'S			MAX					0.01			
10.	CODE	LATITUS	30	LONGITUOE	DAUFT	MARS SQU	ARE	21411	DN TIM	Y.	EAR C	RUI		TATION		DEPTH	DEPTI	H OB	WAVE SERVATIO	NS	THER	CODES		51	ATION
E NO.	10000	•	1/10	* 171	0 2	10"	1.	MO D	AY HR.	1/10		NO	, N	UMBER		BDIIDA	S'MPL	°S OIR	MGT PER	SEA	CDDE	TYPE AM	1	N	UMBER
1124	9 PW	3001	N	13954	vI I	122	09	03 1	4 2	17 19	968	NI	5 009	5		4297	1 15	31		3	X 2	6 7			0005
						[WA	TER	WI	D	BARO»	I	AIR TEN	12. °C	T`	NO.		ECIAL							0002
						ĺ	COLOR		DIR.	SPEED OR	METER		DRY	WET	CODE	DEPTHS		VA TIONS							
							CDDE	(m)	_	FOFGE	(mbs)		BULB	BULB	-	0671113									
									29	515	213		161	156	7	14									
	MESSENG	CAST	CARE	DEPTH	1-1	,	°C		٠,	SIGMA	- s	PECI	FIC VOLUA	V E	A D	50	UND	0 1/1	PD4-	-P T	OTAL-P	NO2-N	NO3-N	SI Da-Si	
	HR 1/10	T NO.	TYPE	DEFIN	furt		C	,		3IG MA		ANO	MALY-X10	2	X 10 ³	VEL	OCITY	D2 ml/l	h8 - e	1/1	vg = 01/1	ug ~ 01/1	1\10 - QU	yg = ot/l	pH
														_		+			1	\top					
	1	, ,	ST	D 000	00	1	820	348	34	2512	2	0.0	2857	2 ' (000	15	169		1	- 1	,			I	
	21	7	085				820	348		251		-	20011	- \			169								
			ST	D 00	0		815	348	33	251:		00	2849	5 (029		169								
	21	7	OBS	00	0	1	815	348	334	251:	3						169								
			ST	D 002	0.5	1	814	348	33	2513	3	00	28504	4 (057	15	170								
	21	7	085	00	29	1	813	348	333	2513	3						171								
			ST	0 00:	30	1	813	348	3	2513		00	2852	1 (086	15	172								
	21	7	085				812	348		2513	3						174								
			ST				814	348		2513		00	2859	7 (143	15	175								
	21	7	085				016	348		2513						15	179								
			ST				813	346		2513		00	28671	8 (214	15	179								
	21	7	085				775	348		252							171								
			ST				749	347		2523			27781		285		163								
		_	ST				621	345		2538		00	26434	4 (353		127								
	21	7	OBS				525	344		2546							098								
		_	ST				491	343		2553		00	2510	1 (417		088								
	21	1	085 ST				275 261	341		257		00	22600	2 0	E 2 /		021								
			ST				123	341		2580			2014		1536		977								
	21	7	085				023	341		2624		00	2014.	1 (045		948								
	21	'	ST				994	341		2628		0.0	18118	a c	739		939								
	21	7	OBS				801	340		2654		00	1011		,,,		880								
		•	ST				782	340		265		0.0	15430) (907		875								
			ST				658	340		2678			1345		051		844								
	21	7	085				579	341		2692		- 0			-) 1		826								
			ST				556	341		2696		00	11799	5]	177		820								
			ST	0 070	00	0	477	342	2.2	271	1	00	10400	0 1	288		805								
	21	7	085	076	5	0	438	342	64	2718	В					14	801								
			ST	0 080	0 (0	427	343	30	2722	2	00	0930	3]	387		802								
			51			0	396	343	8	2732	2	00	0843	2]	475	14	807								
	21	7	085				380	344		273							811								
			ST				369	344		2739			07790		557		813								
			ST				343	344		2744			07334		632		819								
			ST				321	345		2749			06920		703		827								
			ST				301	345		2753			0653		771		836								
	2.0	-	ST				283	345		275		00	06159	5]	834		845								
	21	1	085	T145	4	0.	275	345	75	2759	9					14	851								

FERENCE Y 10.	SHIP	LATITUO	DE LO	NGITUDE JUNE	ZRAM SUUZ	DEN ARE	STATIC	N TI	ME Y	re AR	ORIGIN	ATOR"	N	DEPTH TO	M A X GEPTI		WAVE SERVATIONS		CODES		S1	NODC
E NO.	CODE		1/10	1/10 =	10"	1"	MO Q	LY JHS	2,1/10			NUMBI		BOTTOA	A S'MPL	S DIR.	HGT PER S	EA COOE	TYPE AM	1	N	UMBER
1124	PW	2900		000 W	087	90	03 1	5 1	95 1	968	N15 00	16		4389	15	26		2 X1	6 6			0006
11124	sl . w l	2,00	14 2-	,000 11 1	1	WA.			IND		A ID TO				1	1		- //-	1 0.0	'	'	0000
					ŀ	COLOR			SPEED	METER	•	WEI	VIS.	NO. OBS.	OBECO	ECIAL VATIONS						
						CODE	(m)	DIR.	FORCE	(mbs)		BUL	1 000	DEPTHS	UBSER	AW IIGH 2						
								28	510	224	194	18	9 7	13								
							1					<u> </u>	- ^ -	T	1			-	1			Г
	MESSENGI	P CAST	CARD	DEPTH (m)	T	°C	s ·	1	SIGMA	A-T	ANOMALY-X	107	₹ A D		OCITY	02 ml/	PO4-P	TOTA L-P	NO2-N yg - al/l	NO3-N	SI O4-Si yg - al/l	pН
	HR 1/10	1 ""	1176										X 103	1			py - 2///	pg - siyi	pg - di//	yg - a1/l	98 - 6.11	
		,	STO	0000	1	960	351	6	250	1	002961	. 2	0000	15	212							
	19	5	085	0000	1	960	351	58	250	1				1 5	212							
	19	5	OBS	0008	1	957	351	57	250	1				15	213							
			STO	0010	1	957	351		250	1	002958	30	0030		213							
			STD	0020		957	351		250		002961		0059		215							
			STD	0030		957	351		250		002965	7	0089		216							
	19		085	0030		957	351		250						216							
	19	5	OBS	0046		957	351		250		00007		01/0		219							
		_	STO	0050		958	351		250		002974	+0	0148		5220							
	19	5	OBS	0072		960	351		250		002968		0423		5224							
	1.0		STD	0075		947	351 350		250		002700	, ,	0223		5200							
	19	כ	OBS	0093 0100		868 836	349		251 251		002823	2.2	0295		5191							
			STD	0125		724	348		253		002700		0364		5161							
	19	_	OBS	0139		665	347		253		002100) _	0 2 6 4		5144							
	1,7	,	STD	0150		622	346		254		002594	9	0430		5132							
	19	5	OBS	T0185		485	344		256		00227		0 . 5 0		093							
	1 /		STD	0200		419	343		256		00236	1.0	0554		5073							
			STO	0250		219	342		259		00210		0666		5012							
	19	5	OBS	0279	1	116	341	50	261	0				14	4980							
		_	STD	0300		075	341	4	261	. 7	001919	98	0766	14	4969							
			STD	0400	0	894	340	9	264	, 4	001679	53	0946	14	4919							
			STD	0500	0	739	340	5	266	3	001492	26	1104	14	4875							
	19	5	085	0577	0	638	340	8.0	267	74				14	4848							
			STO	0600	0	610	340	14	268	30	00133	14	1245	14	4841							
			STD	0700	0	507	341	. 8	270) 4	00110	67	1367	14	4817							
	19	5	OBS	0781	0	444	342	869	271	8					4806							
			STO	0800	0	436	342	9	272	2.1	00094	84	1470		4806							
			STD	0900	0	399	343	17	273	31	000854	42	1560		4808							
	19	5	085	T0990		369	344		273						4811							
			STD	1000		366	344		274		00077		1642		4812							
			STO	1100		337	344		274		00072		1717		4817							
			STD	1200		312	344		274		00068		1788		4823							
			STD	1300		292	345		275		00065		1855		4831							
			STD	1400		276	345		275		00062		1919		4842							
	1.0		STO	1500		265	345		275		00059	74	1980		4854							
	19	5	OBS	T1528	0	262	345	000	275	7				1 4	4858							

																	_							
REFERENCE	- SHIP				MAR SOU	SOEN	STATION TI			0	RIGINA	ATOR'S		DEPTH	MAX. DEPTH	00	WAY	VE	WEA-	CLOUD			NOOC	
CODE NO.	COOE	LATITU			5 9!				YEAR	CRUISE NO.		UMBER		TO BOTTOM	0.0			PER SE	CODE	TYPE AM	-		NUMBER	
			1/10	'1/10	10*	1°	MO DAY HI						-						_					1
31 124	9 PW	2855	N L	14004 W	087				968					4755	14	01	<u>,</u>]	- 1 - 2	2 X]	1516	1	1	0007	1
						W.A.		SPEED	BARO	-	IR TEA		VIS.	NO. 085.	SPE	CIAL								
						COLOR	TRANS. OIR.	OR	Imbs:		RY JLB	WET	CODE	OEPTHS	OBSERV	ATIONS								
							0.3	FORCE		_	78		7	14	-		-							
							03	515	28	0 1	10	128					1,-					ī	-	_
	MESSENGI		CARC		. 1	°C	s °/	SIGM	A -T	SPECIFIC		ME X	Δ O.	SOI	UNO	O2 ml/		04-P	TOTAL-P	NO2-N	NO3-N	5104-5		S
	HR 1/10		TYPE						.	ANOMA	(LT-XII		X 103	AFTO	OCITY		128	- at/t	µg = a1/1	ng - 01/1	yg - a1/1	yg - a1/		C
															i									
	1	1	ST	D 0000) 1	961	3516	250	0 '	002	962	9 0	000	15	212		1			•				
	19	2	OBS			961	35159	250		002	, , ,	, ,	- 00		212									
	- /		ST			952	3516	250		002	946	3 0	030		212									
	19	2	OBS			952	35156	250							212									
	- '		ST			951	3516	250		002	947	1 0	059		213									
	19	2	OBS			950	35156	250	3						214									
			ST	D 003)]	950	3516	250	3	002	948	9 0	088	15	214									
	19	2	OBS	004	7]	952	35157	250	3					15	218									
			ST	D 0050		952	3516	250		002	959	9 0	148		218									
	19	2	OBS	0070		953	35155	250							222									
			ST			917	3510	250		002	923	4 C	221		212									
	19	2	OBS			795	34915	252							178									
			ST			754	3483	252		002			292		166									
			ST			620	3458	254		002	626	6 0	359		127									
	19	2	OBS			544	34454	254							104									
			ST			508	3441	255		002	516	6 0	423		094									
	19	2	085			361	34270	257				_			051									
			ST			320	3425	257		002			543		039									
			ST			152	3417	260		002	022	6 0	650		988									
	19	2	OBS			.063	34135	261		001	0 / 0	7 0	7. ~		962									
	1.0		ST			021	3412 34060	262		001	842	2 0	747		949									
	19	2	085 ST			877	34060	264 265		001	576	4 0	918		887									
			ST			1640	3404	267		001			064		836									
	19	2	085			561	34329	268		001			004		814									
	1 7	-	ST			1534	3408	269		001	203	5 1	193		810									
			51			1473	3420	270		001			305		804									
	19	2	OBS			1453	34238	271		001	0,0	-			802									
		_	ST			1432	3429	272		000	943	7 1	405		804									
			51			400	3437	273		200			495		809									
	19	2	OBS			390	34395	273							810									
			51			371	3442	273		000	795	4 1	577		814									
			ST			345	3445	274		000	749		655		820									
			ST	rD 120	0 (322	3448	274	+7	000	706	4]	727	14	827									
			ST			303	3451	275		000			796		836									
			51	rD 140		286	3454	275	55	000	631	5 1	861		646									
	19	2	OBS	5 T142	3 (283	34548	275	56					14	849									

REFERENCE	SHIP				LE MA	RSOEN U ARE	STATION T			01	RIGINA	TOR'S		DEPTH	MAX, DEPTH	0.0	WAV		WEA	- CLOUD			1000	
CTRY ID.	CODE	LATITU	DE 1/10	LONGITUDE 17/10	10. 20		MO DAY H		YEAR	CRUISE NO.		ATION JMBER		TO BOTTOM	0.0			ER SE	THER				UMBER	
		2000		14000 W					1040				_	. =			100							
31 124	9 PW	2900	N J	14000 W	08	7 90 WA		212]]	1968	A1	O O E		\perp	4755	15	05	1	- 1 -	3 X 1	1 615	1	- 1	0008	
						COLOR		SPEED	METE)• <u> </u>		WET	VIS.	NO.	OBSERV	LAICHE	ŀ							
						CODE	lm1 Olk	FORCE	(mbs			BULB		DEPTHS	ODJEKY	~ 110143								
							06	520	31	5 18	39	183	7	14										
	MESSENGE	TZAS	CARO							SPECIFIC	VOLUM	. 2	∆ 0, N. M.	SOI	סאנ		PC	14-7	TOTAL-	NO2-N	NO3-N	\$104-\$0		5
	HR 3/10	OF NO.	TYPE	OEPTH (m1	ĭ °C	s °/	SIGM	1 A A T	ANOMA	14-#10	, DA	N. M.	. VELO	DCITY	0 2 ml/		- 01/1	μg = ot/l		yg - a1/1	1/10 - QU	ρH	C
	NK 1710						1					+		+			-	-						+
	1	1	ST	000	0	1969	3518	250	വ	0029	960	7 O	ono	1 15	215		-	1		l	1			1
	21.	2	OBS	000		1969	35177	250		002,	, , ,		- 00		215									
	21.		OBS	000	9	1958	35178	250							213									
			ST			1958	3518	250	03	0029			030	15	213									
			ST			1957	3518	250		0029			059		215									
			ST			1956	3518	250		0029	9490	0 0	089		216									
	21.		085	003		1956	35176	250							216									
	21	2	085	004		1955	35173	250		0030	166	, ,	1 / 0		219									
	21.	2	STI OBS	0 005		1955 1957	3517 35175	250		0029	700.	, ,	148		219									
	21	_	ST			1954	3517	250		0029	2620		222		223									
	21	2	085			1880	35064	25		002	, (, 0, 5,	, 0	~ ~ ~ ~		204									
		_	ST			1860	3503	25		0028	3444	+ 0	294		199									
			ST			1736	3481	25		0027			364		164									
	21	2	085	014	4	1642	34668	25	41					15	137									
			ST	0 015	0	1610	3462	25	45	0025	83	1 0	430	15	128									
	21	2	OBS	T019		1407	34361	25							068									
			ST			1372	3434	25		002			552		057									
		_	ST			1178	3420	260		0020	1476	5 0	661		998									
	21	2	OBS			1065	34131 3411	26.		0016	2/2/		759		963									
	21	2	STI			0866	34052	26. 26.		0018	3030) ()	159		903									
	21	_	ST			0817	3405	26		0015	5885	3 0	931		889									
			ST			0655	3404	26		0013			080		842									
	21	2	OBS			0570	34027	261		0011		_	- 00		819									
			ST	060	0	0544	3407	26		0012	2235	5 1	210	14	814									
			ST	0 070	0	0475	3419	27	08	0010	0598	3 1	324	14	804									
	21	2	OBS	075	7	0444	34251	27	17					14	802									
			ST			0429	3429	27.		0009	940	1 1	424	14	803									
			ST			0397	3438	27		0008	3444	+ 1	513		807									
	21	2	OBS			0381	34416	27							810									
			ST			0368	3443	27:		000			595		813									
			ST			0342	3446	27		000			671		819									
			ST			0320	3448	27		0007			743		826									
			ST			0301	3451 3454	27		0006			811		835									
	21	2	ST OBS			0285	34558	27		0006	5326	0 1	876		846									
	21	2	005	T147	2	0275	34338	27	28					14	854									

REFERENCE	SHIP				LE N	ARSDEN	TOTATE	TIME			ORIGIN	ATOR"	S	DEP	тн	MAX. DEPTH			VE	. T	WEA-	CLOUD			NODC	
CTRY ID.	CODE	LATITU	1/10	LONGITUDE '1/10	10 5 L	OUARE	MO I DAY		YEAR	ICK!		STATIC		8011		OF S'MPL'S	1		T PER	- 1	THER	TYPE AM			STATION NUMBER	
	Div	2001									_			4.3	26					_						
31 1249	PW	3001	. N	13955 w	1 1 7	22 09 WA	03 18	188			15 00			42	—т	17	10	1	1 1	3	XI	5 6	1	1	0009	
							1	S P E	ED MAR	RO-	DRY	WE	- VIS	15 US	18.	SPEC OBSERV										
						CODE	lm t	IR, O	K	bs1	BULB	BUL		DEPT	THS	003011										
							1	1 52	3 3	01	178	13	3 8	1.	4											
	MESSENGR TIME HR 1/10	CAST NO.	CARD	ОЕРТН	(m)	т "с	s =4	, s	IGMA-T	SPEC	CIFIC VOLU	IME 10 ⁷	₹ △ C DYN. A X 10 ³	λ. ,	VELO		02 ml/		PO4-P		07AL-P	NO2~N µg + 01/I	NO3-N 99 - 01/I	\$1 O4-		s c c
			ST			1801	3482		515	0	02822	Û	0000			163										
	188	3	085	000		1801	3482		515	_	0 20 1 2		000			163										
	100		ST			1797	3483		516	0	02813	8	0021			164										
	188	3	OBS			1796	3482		517	_	02015		005			164										
			ST ST			1796 1796	3482		517 516		02815		0050			165 167										
	188		085			1796	3482		516	0	02020	, _	000			167										
	100)	ST			1794	3482		517	0	02822	16	014			169										
	188	a	085	005		1794	3482		517	0	02022	. 0	014.			170										
	100		ST			1797	3482		516	0	02839	5	041			174										
	188	3	085	008		1798	3483		516							175										
			ST			1794	3482		517	0	02841	. 0	028			177										
	188	3	085	010	4	1793	3481	7 2	517						15:	178										
			ST	0 012	5	1676	3462	2	530	0	02722	1	035	2	15	144										
			ST			1539	3441		545	0	02582	3	041			103										
	188	3	085	015		1506	3436		549							094										
	100		ST			1267	3411		579	0	02267	0	004			019										
	188	3	085			1236	3408		583	0	00000	. ~	04.6			009										
			ST ST			1143	3409		601		02062		0641			984 955										
	188	2	085			1006	3410		627		01000	, _	014			946										
	100)	ST			0828	3402		648	Ω	01626	. 7	092			893										
	188	3	085	T042		0776	3401		2655		01020	, ,	0 / 2 !			877										
			ST			0679	3466		673	0	01396	7	107			852										
			ST	0 060	0	0566	3413	. 2	693	0	01207	7 1	120.	3	148	824										
	188	3	085	T064	5	0524	3419	9 2	700						148	815										
			ST	0 070	0	0487	3421	. 4	709	0	01059	7	131	7	141	809										
			ST			0430	3428		720	0	00948	37	141			803										
	188	3	085			0402	3433	-	727							802										
			ST			0390	3436		2731		00851		150			804										
			ST			0362	3443		2739	0	00774	• 6	158			810										
	188	3	OBS			0344	344		744							814										
			ST			0336	3448		2746		00717		166			816										
			ST			0313	3450		749		00684		173.			824										
			ST			0292	345]		753		00652		180			8 3 2										
			ST ST			0274	3453 3455		2756 2759		00622		186			841 851										
	188	4	085			0235	3458		2764	0	00090	, ,	172			873										
	100		003	1100	•	3233	5770		. 104						(0,70										

REFER	ENCE				- =	MARSDEN	STATION TI		ORIGINA	TOR'S	DEPTH MAN		WAVE	WEA			1	NODC	
CTRY	ID.	CODE	LATITU		ONGITUDE	SQUARE	(GMT)	YEAR		ATION UMBER	BOTTOM S'MPL	003	ERVATIONS	CODE				UMBER	
100	ΝΟ,			1/10	1/10	10" 1"	MO DAY H		+			1	HGS FER S					0020	
31	1249	PW	3002	N 1	3952 W	122 09		194 1968			4572 15	13		3 X2	4 8	1	- 1	0010	
								SPEED MET		WET CODE	OBS. Daces	ECIAL VATIONS							
						CODE		OR (mb		BULS	DEPTHS	VAIIONS							
							23	S15 14	2 172	144 7	14								
		MESSENGR		CARD			1		SPECIFIC VOLUA	AF ≨ △ D	SOUND		PO4-P	TOTAL-P	NO2-N	ND3-N	\$1 O4-Si		5
		TIME	CAST NO.	TYPE	DEPTH (m)	ĭ °C	5 %.	SIGMA-T	ANOMALY-X10	7 DYN, M	VELOCITY	02 ml/l	µg - 01/l	yg - 01/1		µg - 01/1	yg = a1/1	рН	č
		HR 1/10					-							1					П
		1	1	STC	0000	1777	3474	2515	0028228	3 0000	15155	l	1	1	1	1	,		
		194		OBS	0000	1777	34744	2515	002022		15155								
				STO	0010	1775	3474	2516	002821	4 0028	15156								
		194	4	OBS	0010	1775	34744	2516			15156								
				STO		1775	3474	2516	002823										
				STO		1774	3474 34743	2516 2516	002826	3 0085	15159 15159								
		19		OBS OBS	0030	1774 1774	34745	2516			15162								
		19	+	STO	_	1774	3475	2516	002831	9 0141									
		19	4	OBS	0071	1778	34746	2515	002071		15167								
				STE	0075	1778	3475	2515	002847	4 0212	15168								
		19	4	OBS	0095	1776	34744	2515			15170								
				STE		1751	3470	2518	002827										
				ST		1623	3451	2534	002684	2 0352									
		19	4	OBS	0144	1526 1491	34376 3433	2545 2549	002539	3 0417	15098 15087								
		19	<i>i.</i>	STI OBS	0150 T0195	1264	34059		002559	071	15017								
		19	4	STO		1247	3407	2580	002258	6 0537									
				ST		1094		2611	001971		14967								
		19	4	OBS	0289	0989	34110	2630			14936								
				STO	0300	0964	3410	2633	001762	5 0736									
		19	4	OBS	T0387	0786					14875								
				ST		0763		2658	001527										
				STI		0613		2680	001326	2 1044	14825 14804								
		19	4	OBS	T0579	0528 0518		2691 2694	001191	0 1170									
				STI		0473		2709	001050										
		19	4	OBS	0771	0444			001030	0 1-0.	14804								
			*	ST		0433		2722	000937	4 138	14805								
				ST	0900	0398	3437	2731	000853	0 1470									
		19	4	OBS	T0972	0375					14811								
				ST		0367		2739	000780										
				ST		0339		2746	000718										
				STI		0315		2750 2755	000675										
				ST		0277		2757	000614										
		19	4	OBS	T1474	0267			000014	, , ,	14851								
		17	7	003	12.1.7	02.0	,,,,,	2,50											

	2HIP	LATITU	D	LOW	GITUDE	# MAR	SDEN ARE	STATIO	TIME			ORI	GINAT	OR"S	DEPT	H Dr	AX. PTH		WAVE	WEA	CLOUD	T -		NODC	
CODE NO.	3000	·	1/10		GITUDE TE	10°		MO DA			YEAR	CRUISE NO.	STAT	NOIT	BOTTO		OF		RVA TION	S THER	CODES			MOITATE	
311249	PW	3000		130	958 W	122				_	040			THE K	_	3 M	PL°S		HGT PER	DEA .	TYPE AM	1		NUMBER	
1 22/22 4 3/		2000	74	10) JO W	122	WA		19 WIN	_	968		TEMP.	then T	429	77	15	28		2 X1	66	1		0011	
							COLOR	1	5	PEED	METE			V1			SPECIA	AL							
							COOE	lm1	IR,	OR ORCE	(mbs			ULB CO	DEPT		ERVAT	IIONZ							
								2	9 5	15	15	9 150	1	50 7	14										
	ESSENGR	CAST	CAR	n				1	Τ'n			SPECIFIC V	311111	5 1					1	T			_		Т
н	TIME OF	NO.	TYP		DEPTH Im:		°C	s °/.	٠	SIGM	A-T	ANOMALY	-X10 ²	₹ Δ I DYN. I X 10 ³	и. _V	ELOCITY	, 0	2 ml/l	PO4-P pg - at/1	10TAL-P	NO2-N ug = 01/I	NO3-N	SI O4~S		3
								_	\rightarrow					N 10	-		+-		-	-		pg - 001	pg - 412	-	1
1	'	1	ς.	TD !	0000	1	776	3475	, 1	251	۷ ا	0028	76	1	_	E > E /	_		1	1					1
	192		089		0000		776	3474		251		0020	175	000		5155									
	192		083		0007		774	3474		251						5155									
			\$1	Tρ	0010	1	773	3475		251		0028	39	002		5156									
			51		0020	1	772	3475		251	7	0028		005		5157									
	192		OBS		0029		771	3474		251					1	5158	3								
	192		51		0030		771	3475		251		0028	.72	008	4 1	5158	3								
	192		083		0047		771 772	3475		251						5161									
	192		089		0074		774	3475 3474		251 251		00282	31	014		5162									
	- / -		S1		0075		774	3475	-	251 251	-	00283	0.6	0212		5166									
	192		085		0096		769	3474		251		00203	04	021		5167 5169									
			51		0100		750	3472		252		00281	0.2	0282		5163									
			\$1	D	0125	1	632	3456		253		00266		035		5130									
	192		OBS	5	0145	1	537	3443	8	254	8					5102									
	100		ST		0150		511	3440		255	0	00253	02	0416		5095									
	192		OBS		T0195		301	3414		257					1	5030)								
			ST		0200		284	3414		257		00227		0536	5 1	5025	>								
	192		OBS		0250		121 998	3413		260		00199	66	0643		4977									
	1 1 2		ST		0300		980	3411		262 263		00170	0.7	0.70.		4940									
	192		085		0391		778	3402		265		00178	8 /	073		4934									
			ST		0400		762	3402		265		00152	70	0903		4872 4867									
			ST	0	0500		513	3403		267		00132		1046		4825									
	192		OBS	,	T0589	0	519	3404		269				1040		4802									
			ST		0600	0	514	3406		269	4	00119	35	1172		4802									
			ST		0700		473	3419		270	9	00105	74	1285		4803									
	192		OBS		0781		441	3428		271					1	4805									
			ST		0800		33	3430		272		00093		1384		4805									
	192		085		T0976		396 370	3437		273		00085	06	1474		4807									
	1,2		ST		1000		362	3443	-	273		00077	, ,	1555		4809									
			ST		1100		334	3448		274		00071		1555		4810 4816									
			ST		1200		309	3452		275		00066		1698		4816 4822									
			ST	D	1300		89	3455		2756		00062		1762		4831									
			ST	D	1400	0.2	74	3456		758		00060		1824		4841									
			ST		1500	02	62	3456		759		00059		1883		4853									
	192		OBS		T1504	0.2	62	3456	3 2	75	9					4854									

RENCE	SHIP			E #	MARS		STATID	N. TIM				ORIGINA	ATO	R*S	DEP		MAX,		WAVE	DAG	WEA-	CLO				NODC	
ID.	CODE	LATITU		NGITUDE NGITUDE	SOU		IGA			YEAR	CRUISE NO.			ION IBER	30 TT		OF S'MPL"	-	SERVAT		THER	CDD			5	TATION UMBER	
-			1/10	1/10 =	10"	1		Y HR,			-	-		TOEK					HGTP			TYPE	\rightarrow				
1249	PW	3004	+ N 1	3955 W	122			2 18		1968	NIS				438	39	15	30		2	X 1	61	2]		1	0012	
						WA1	_	WIN		BAR	D-	AIR TEN	AP.	°C VIS	NO		SPE	CIAL									
						COLOR	TRANS. D	UR.	SPEED	(mbi		DRY		JLB COL	DEPT	H5		ATION S									
						CODE		_	FORCE 505	-	-				1 1 0	,											
							-	74	305	26		189		33 8	14	*							-				
	MESSENGR TIME 0	CAST	CARD	DEPTH (m)	Т.	°C	5 */	.	SIGN	1 A - T		C AOFRY		₹ ∆ D	.	sou		O ₂ ml/	, PO.	-P 1	OTAL-P	NO2-	N	NO3-N	51 04-51	- 14	S
	HR 1/10	ND,	TYPE	GEFTIN GILL	'		' '	.	310 //	1001	ANOA	AALY—X10	37	x 10 ³	" V	/ELO	CITY	02 11117	n8 .	01/1	µg - 01/1	78 - 01	71	1\10 - QU	µg = at/l	pН	C
	1111		<u> </u>		_		1																\top				\top
	1	i	STO	0000	1	794	3482	,	25	1.7	00.	2807	1	000	١ ،	1 6	ا 161		1	1			- 1	'		1	1.1
	186		OBS	0000		794	3482		25		000	2001	1	000			161										
	130	,	STO	0010		792	3482		25		00	2805	7	002			162										
	186	,	OBS	0010		792	3482		25		001			002			162										
	100		STD	0020		790	3483		25		002	28000	0	005			163										
			STD	0030		789	3483		25			2797		008			165										
	186	,	OBS	0030		789	3483		25								165										
			STO	0050	1	794	3489	5	25	19	002	2799	6	014	0 1	15	170										
	186	,	OBS	0050	1	794	3485	53	25	19					1	15	170										
			STD	0075	1	799	3486	5	25	19	002	2812.	3	021	0]	15	175										
	186)	OBS	0075	1	799	3486	5.3	25	19					1	15	175										
			STD	0100	1	796	3486		25	19	00	2817	8	028	1 2	15	178										
	186)	OBS	0100	1	796	3485	57	25	19						15	178										
			STD	0125	1	642	3459	7	25	35	002	26681	0	034	9 .	15	133										
			5T0	0150		494	3437		25		002	2516	4	041			089										
	186	5	OBS	0152		482	3439		25								085										
			STD	0200		208	3406		25		00	2193	4	053.			998										
	186	5	OBS	T0208		172	3402		25				_				987										
			STO	0250		081	3406		260			1981		063			962										
	107		STD	0300		977	3409		26:		00.	1788	9	073			933										
	186)	OBS	0305		967	3409		26				_	0110			930										
	104		STO	0400		782	3402		26		00.	1557	8	289			875										
	186)	OBS	10409		766	340		26		0.0	1222	۷	1.04			870										
			STD STD	0500 0600		615 497	3403		26			1332: 1157:		104.			826 795										
	186		OBS	10606		491	3408		26		00.	1157	7	110			195 794										
	100	,	STD			448	3421		27		00	1012	6	127			793										
			STD			410	3431		27.			0902		137			795										
	186		085	0810		407	3432		27.		000	0,02	,	101			796										
	100	<i>'</i>	STD			384	3438		27		0.00	0829.	2	145			802										
			STD			359	3444		27			0763		153			809										
	186	5	085	T1006		358	3444		27								810										
	100		STD			337	344		27		000	0727	1	161			817										
			STD		0	316	3449	9	27		000	0692	8	168	3	14	825										
			STD			296	345		27			0658		175			833										
			STD		0	279	3454	4	27	55		0627		181			843										
			STO			263	3456		27			0597		187			853										
	186	5	OBS	T1531	0	258	3456	56	27	60						14	857										

REFERE		SHIP			- H	MAR	DEN	STAT	ION T	ME	WE		ORIGIN			DEPTH	MAX. OEPTH	-	WAVE	WEA				NODC	
CTRY	ID.	COOE	LATITU		LONGITUDE JUNE	\$00			(GMT)		YEAR	CRU1		TATION		BOTTON	. OF	1	ERVATIONS	THER	COOES		5	TATION	
-		-		1/10	1710	10°	1*		DAY H			+-	+		-		7 11/12		HGT PER SE	-	117FE AM	T			
3 1 1	249	PW	3001	N]	13951 W	122	09			186	1968	3 N 1			\perp	4480	42	07		1 ×1	2 3	1		0013	
								ATER	1	VIND	BAF		DRY DRY		VIS,	NO. 085.	SPE	CIAL							
							COLO	R TRANS	OIR,	SPEEL OR FORC	ME)		BULB	W ET BULB	CODE	DEPTHS	OBSERV	ATIONS							
								1	09	509	_	8	183	144	8	21									
			1		1	7	_	1	10,	1						1			T .					_	
		MESSENGR TIME	LCAST	CARE		1	°C	5	٠/	SIG	MA-T	SPECI	HC VOLU	ME 2	A 0, N,	. 50	OCITY	O2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	\$104-5	рН	Š
		HR 1/10	1	11176		ļ						-			x 103	V E C.	OCITY		yg - 01/1	μg = e1/l	n8 - ot/i	yg - at/l	µg ~ 01/		C
																			1 1						
				5.1			793	34			16	0.0	2817	1 0	000		161								
		186	5	085			793		803		16						161								
				ST			791	34			16	0.0	2816	5 0	028		162								
		186	5	085			791		802		16	0.0	2012	0 0	051		162								
				ST			788 786	34 34			517		2812		056 084		162								
		186	4	085			786		804		518	00	2009	9 0	004		163								
		100	,	51			789	34			518	0.0	2813	3 0	141		168								
		186	ń	085			789		818		518	•		- 0	- ' '		168								
				51			793	34			518	0.0	2822	9 0	211		173								
		186	5	085	0075	1	793	34	829		518						173								
				ST	D 0100	1	757	34	76		521	0.0	2800	2 0	281	1.5	166								
		186	ò	OBS	0100		757	34	756	2.5	521					15	166								
				\$ T			591	34			39		2636		349	15	116								
				ST			439	34			556	0.0	2475	6 0	413		070								
		186	5	OBS			427		254		557						066								
				ST			171	34			89	0.0	2162	6 0	529		985								
		186	5	085			150		992		92	0.0	10/2	7 0			978								
				ST			052 952	34 34			513		1943 1748		632		951								
		186		5 T 0 B S			942		097		36	UU	11/40	9 0	724		924								
		100	,	51			778	34			557	0.0	1540	9 0	889		874								
		186	5	085			770		032		558						871								
				ST	D 0500	0	622	34	04	26	579	0.0	1334	4 1	032		829								
				ST	D 0600	0	509	34	09	26	597	0.0	1165		157		800								
		186	ò	085	T0611	0	499	34	094	26	98					14	798								
				ST.	0 0700		459	34	20	2.	711	0.0	1033	1 1	267	14	798								
				\$ T			421	34			723	0.0	0923	2 1	365		008								
		186	5	OBS			417		313		724						800								
				ST			390	34			732		0842		453		804								
		1.0		ST			362	34			740	00	0770	9 1	534		810								
		186	>	085 51			360 340	34	439		740 745	0.0	0726	0 1	609		811								
				5 T			319	34			749		0687		680		+818 +826								
				51			299	34			752		0656		747		835								
				ST			281	34			756		0626		811		844								
				ST			264	34			759		0597		872		854								
		186	5	085			261		565		759						855								
		206	5	OBS	T1652	0	240	34	585	2	763					14	869								
				ST			228	34	60	2	765		0538		014		881								
				51			201	34			769	0.0	0502	3 2	144		912								
		206	ò	QBS			187		635		771				_		934								
		20.		ST			169	34			774	0.0	0458	7 2	385		984								
		206)	OBS			162		661		775	0.0	0662	0 2	600		010								
		206	4	ST 085			155 152	34	674		776 777	00	0441	0 2	609		065								
		206		0BS			148		682		778						176								
		200	,	51			149	34			778	0.0	0449	7 3	055		237								
		206	5	085			149		684		778	00	- J-4-4	, ,	~))		261								
		200		OBS			151		688		778						201								

															_		
REFERENCE	SHIP			MARSOEN	STATION TIA		ORIGINAT		OEPTH OEP		WAVE SERVATIONS	WEA-	CLOUD		4	ATION	
CTRY ID.	COOF		LONGITUDE	SOUARE		YEAR	CRUISE STA	TION MBER	TO OT	F	HGT PER SE		TYPE AMI	-		JABER	
-		1/10	'1/10 =		MO OAY HE		+ +										
31 1249	PW 30	00 N 1	13954 W	122 09 WAT		94 1968	N15 014			5 31		2 X1	2 6	ł	- 1	0014	
						SPEED MET	0-	WET CODE		PECIAL RVATIONS							
				COOE	Imi DIR,	FORCE (mbs		DULB CODE	OEPTHS OBS								
					09	505 26	8 200	168 7	14								
						Γ		T × A D	SOUNO	T	PO4-P	TOTAL-2	NO ₂ -N	NO3-N	SI 04-SI		S
	MESSENGR CA		OEPTH (m)	7 °C	s °/	SIG MA -T	ANOMALY-X10?	∑ ∆ D OYN. M. X 10 ³	VELOCITY	O ₂ ml/	yg - 01/1	yg + 51/1	νg - οι/Ι	yg - at/1	µg = at/	pН	00
	HR 1/10							1 10		+	-						+
				1036	2402	2516	0020110	0000	15171		1 1						1
		STO	0000	1826 1826	3492 34917	2516	0028118	0000	15171								
	194	0BS		1823	34917	2517	0028066	0028	15172								
	194	085	0010	1823	34919	2517	0020000	0020	15172								
	174	ST		1817	3492	2519	0027965	0056	15172								
		ST		1813	3492	2520	0027911	0084	15173								
	194	OBS	0030	1813	34917	2520			15173								
		STO	0050	1812	3492	2520	0027954	0140	15176	,							
	194	OBS	0050	1812	34917	2520			15176								
		ST		1816	3493	2520	0028059	0210	15181								
	194	OBS	0075	1816	34927	2520			15181								
		STI		1815	3493	2520	0028075	0280	15189								
	194	OBS	0100	1815	34933	2520	0007771	0310	15185								
		STO		1709	3471 3450	2529 2544	0027314	0349	15155								
	194	STI OBS	0 0150 0152	1575 1563	34480	2545	0025941	0416	15112								
	194	STI		1220	3407	2585	0022082	0536									
	194	OBS	T0202	1209	34062	2586	0022002	0,00	14999								
	174	ST		1096	3410	2610	0019747	0641	14968								
		ST		0984	3410	2630	0017952	0735	14936								
	194	085	0306	0971	34103	2632			14932	2							
		ST	D 0400	0776	3402	2656	0015498	0902	14873	3							
	194	OBS	T0410	0758	34010	2658			1486								
		ST		0610	3403	2680	0013260	1046									
		ST		0494	3409	2698	0011468	1169									
	194	OBS		0485	34096	2700	0010221	1 / 70	14792								
		ST		0450	3420	2712	0010224										
		ST		0416	3430	2723	0009173	10/0									
	194	OBS		0413	34310 3438	2725 2733	0008327	1462	14798								
		ST		0387	3444	2740	0007660	1542									
	107	ST		0360	34441	2740	0007660	1342	14810								
	194	OBS ST		0337	34441	2740	0007087	1616									
		ST		0316	3453	2752	0006618		_								
		ST		0296	3455	2755	0006304										
		ST		0280	3456	2757	0006105		1484								
		57		0265	3456	2759	0005987		14854	4							
	194	OBS		0262	34562	2759			1485	7							

REFERENCE SHIP LATITUDE LONGITUDE OF 10. CODE 1/1/10 10. TO FOR STATION TIME CODES STATION NUMBER OF 1/1/10 10. OF										natr.		I MAX.		N/ A 1/		- WEA	CLOUG			NODC	
	REFERENCE	SHIP			1017110s E.S.					TION	TO	DEPTH	08	SERVA	TIONS	THER			S .	NOITAT	
	CTRY IO.				11/10						MOTTON		DIR.	HGT I	FER SE	COOE	TYPE AMI			OWREK	
Note		9 PW							N15 015		4755	15	12		í	2 X Z	6 8	1		0015	
COORD COOR	J 1/1 2 .	1			, ,	WAT	ER W	INO BAR	O- AIR TEMI	, °C VIC	NO.	SPE	CIAL								
								OR .		WET CODE											
MISSINGE CARD MISSINGE CARD MISSINGE CARD MISSINGE						COOE		TORGE						-							
STD 0000 1800 3480 2514 028357 0000 15163 15162 15162 15162 15162 15162 15163 15							11	505 27	1 189	156 7	14			<u> </u>							
STD 0000		MESSENGR	CAST		OEPTH Im)	1 °C	s ./.	SIGMA-T		DYN. M			02 ml/							рН	
195		HR 1/10	NO.	TYPE						X 10°	-			-						_	F
195						1000	3490	2514	0028357	0000	1 15	163		- 1	- 1		1	l	1		
195									0020001	0000											
195												-									
STD 0020		195							0028226	0028											
195																					
195		100							302322												
195		195	>		-				0028061	0085	5 15	162									
STD		100									15	164									
195		19:)						0028103	0141	1 15	164									
STD O075		195	5				34789	2519													
195		* 7 .				1776	3479	2519	0028096	021											
STD		199	5	OBS	0094	1773	34799														
195				STD	0100	1730	3472														
STD				STD	0125	1575			0026304	0341	_										
195 OBS T0193 1328 34154 2570		19	5	OBS	0144																
STD O200 1302 3415 2575 O023046 O533 1503i STD O250 1133 3413 2606 O020179 O641 14981 195 OBS O287 1028 34110 2623 STD O300 1000 3410 2623 O18217 O737 14941 195 OBS T0385 O830 34027 2649				STO	0150	1462			002522	9 041		-									
STD 0250 1133 3413 2606 0020179 0641 14981 195 0BS 0287 1028 34110 2623 14950 STD 0300 1000 3410 2623 0018217 0737 14941 195 0BS T0385 0830 34027 2649 14881 STD 0400 0797 3403 2654 0015740 0907 14881 STD 0500 0617 3404 2691 14801 STD 0500 0511 3408 2696 0011750 1178 14801 STD 0600 0511 3408 2696 0011750 1178 14801 STD 0700 0465 3421 2711 0010329 1288 14800 195 0BS 0763 0439 34272 2719 14801 STD 0800 0426 3430 2722 0009291 1386 14802 STD 0800 0426 3430 2722 0009291 1386 14802 STD 0900 0393 3437 2731 0008471 1475 14806 195 0BS T0959 0375 34406 2736 0007846 1556 14810 STD 1100 0363 3442 2743 0007846 1556 14810 STD 1100 0363 3442 2743 0007846 1556 14810 STD 1200 0314 3447 2747 0007008 1705 14824 STD 1300 0294 3450 2752 0006295 1838 14863 STD 1400 0278 3453 2755 0006295 1838 14843		19	5						00000	063											
195 OBS 0287 1028 34110 2623 14950 STD 0300 1000 3410 2627 0018217 0737 14941 195 OBS 10385 0830 34027 2649 STD 0500 0617 3403 2654 0015740 0907 14881 STD 0500 0617 3404 2679 0013307 1052 14827 195 OBS 10573 0524 34042 2691 14801 STD 0600 0511 3408 2691 0011750 1178 14801 STD 0700 0465 3421 2711 0010329 1288 14800 195 OBS 0763 0439 34272 2719 STD 0800 0426 3430 2722 0009291 1386 14802 STD 0800 0426 3430 2722 0009291 1386 14802 STD 0800 0333 3437 2731 0008471 1475 14806 195 OBS 10959 0375 34406 2736 STD 1000 0363 3442 2738 0007846 1556 14810 STD 1100 0337 3445 2743 0007412 1633 14816 STD 1200 0314 3447 2747 0007008 1705 14824 STD 1300 0294 3450 2752 0006295 1838 148824 STD 1300 0294 3450 2755 0006295 1838 14883																					
195					-				002017	9 004											
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195									001021	, 0,5											
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STD 1200 0314 3447 2747 0007008 1705 14824 STD 1300 0294 3450 2752 0006627 1773 14832 STD 1400 0278 3453 2755 0006295 1838 14843		17			1000	0363	3442	2738			-										
STD 1300 0294 3450 2752 0006627 1773 14832 STD 1400 0278 3453 2755 0006295 1838 14843				STD	1100	0337	3445														
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5/0 1400 0210 34517 0757				STD																	
195 OBS 11456 0270 34547 2757 14849				STD	_				000629	5 183	_										
		19	5	OBS	T1456	0270	34547	2757			1	4849									

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RENCE	SHIP	LATITU	IOE I	DNGITUDE PETTON	MAR	SDEN	STAT	ION TIA		AR		ORIGIN			DEPTH	MAX. OEPTH	O8	WAVE SERVATION	15	WEA-	CLOUD		1	2000	
10,	CDDE	4	1/10	11/10	10"		MO I			. Cin	CRUIS NO.		STATION UNIVERSE		BOTTON	S'MPL"		HGT PER		CODE	TYPE AM	-	N	A TION UMBER	
1249	PW	3004			122					2 / 0		5 01			. =			101111							
1247	1 - W	3004	F IN [I	3955 W	122	WAI			01 19	968	N1	5 01			4755	15	15	1 1 1	2	X 1	67	1	1	0016	
						CDLOR		1	SPEED	METE				VIS.	NO. DBS.		CIAL								
						CODE	IMANS,	OIR.	OR	(mbs		ORY BULB	BUI	LB CODE	OEPTHS	OBSERV	ATIONS								
								10	508	27	1	172	16	51 7	14										
		1		1	7			10	000	- 1		1.2				1			_						П
	MESSENGR TIME	LCAST NO.	C ARD TYPE	DEPTH (m)	T	℃	5	٠/	SIGMA	-1	SPEC1F	MALY-X	ME n?	₹ △ D DYN, M	50	UND	02 ml/	PO4-P		TAL-P	NO2-N	ND3-N	\$104-51	ρН	S C
	HR 1/10	1	1116											x 10 ³	AEL	DCITY		yg - 01/	Ι μς	g = at/1	n8 - al/(yg - at/1	µg - 01/1		C
																		1							
	•		STD	0000	1	780	346	59	251	1	00	2866	8	0000	15	155		1							1
	201	1	OBS	0000		780	346		251							155									
			STD	0010		774	346		2514		00	2856	2	0029		155									
	201	1	OBS	0010		774	346		2512							155									
			STD			762	346		2512			2862		0057		153									
	2.0		SID			752	346		2514		0.0	2864	9	0086		151									
	201		OBS	0030		752	346		2512							151									
	201	ī	OBS	0049		739	346		2515					- 1 -		151									
	201	,	STD	0050		740	346		2515		00	2840	1	0143		151									
	20.	T	085 STD	0074 0075		742	346		2515 2515		00	2062	i)	0214		156									
	201	1	085	0098		726	346		251		00	2852	0	0214		156 155									
		•	STD	0100		717	346		2519		00	2821	7	0285		152									
			STD			609	344		2533			2689		0354		122									
	201	}	OBS	0149		509	343		2546		00	2009	O	0 3 3 4		093									
		•	STD	0150		505	343		2546		0.0	2568	7	0420		092									
			STD	0200		313	341		2573			2344		0542		035									
	201	l	OBS	T0200	1	313	341		2571							035									
			STD	0250	1	143	341	12	2603	3	00.	2045	3	0652		985									
	201	1	OBS	0298	1	010	341	109	2626	5					14	945									
			STD	0300	1	006	341	1	262	7	00	1826	6	0749	14	944									
	201	l	OBS	T0398	0	827	340	22	2649	9					14	892									
			STD	0400	0	823	340	2	2649	9	00	1616	6	0921	14	891									
			STD	0500		645	340		267	7	00	1358	4	1070	14	838									
	20]	l	OBS	T0594		526	340		2693						14	806									
			STD	0600		522	340		2694			1188		1197		806									
	20		STD	0700		466	341		2709		00	1049	0	1309		801									
	20]	L	OBS	0786		425	342		2720							799									
			STD	0800		420	342		2722			0929		1408		799									
	20.		STD	0900		386	343		2732		00	0838	9	1496		803									
	20]	L	OBS	T0982		361	344		2740		0.0	07/0	_			807									
			SID	1000		356	344		2740			0763		1577		808									
			STO	1100		329	344		2745			0721		1651		813									
			STD	1200 1300		306	344		2749			0683		1721		820									
			STD			287	345		2753			0649		1788		829									
	201		085	1400		260	345		2756		000	0618	4	1851		840									
	20]	L	005	T1485	U	260	345	900	2759	7					14	849									

										-	MAX	-	111 A 1/E	NIE A	CLOUO			40DC	
FERENCE	SHIP			=5	MARSDEN	STATION T	IME YEAR	ORIGINA CRUISE S	TATION	OEP	THE OFFICE		WAVE ERVATIONS	WEA-	CODES		8.	UMBER	
Y ID.	3000	LATITU		ACITUOE ES	- 1	MO DAY		NO. N	UMBER	BOTT	OM S'MPL	S DIR.	HGT PER SE	COOE	TYPE AMT		N	OWER	
+			1/10				198 1968	N15 01	7	47	55 15	07		2 X1	2 6			0017	
11249	PW	3008	N 13	958 W	122 09			A 10 TEA	AP. °C	NI		CIAL	, , ,						
					COLOR		T SPEED WAR	ER ORY	WET C	OS. OEP	S. ORSER	ATIONS							
					COOE	IRANS. OIR.	FORCE (mb	s) BULB	BULB	GEP	1113								
						08	520 27	74 183	150	7 1	4								
						1		SPECIFIC VOLU	ME E A	0	SOUND	02 ml/	PO4-P	TOTAL-P		NO3-N	SI O4-5	pH	S
	MESSENGE	CAST	C ARO TYPE	OEPTH (m)	ĭ °C	5 %.	SIGMA-T	ANOMALY-X	DYN.	03.	VELOCITY	O 7 mi/	μg - e1/I	μg • ot/1	ug - at/l	yg = at/l	pg + at/i		c
	HR 1/10							-	_	_									
					. = 0.0	2471	2511	002857	4 001	20	15156		ı	1					
			510	0000	1780 1780	3471 34706		002037	4 00.		15156								
	19		OBS OBS	0000	1774	34711					15155								
	19	В	STD	0010	1774	3471	2513	002842	4 00	28	15156								
			STO	0020	1774	3472	2514	002839			15157								
			STD	0030	1774	3473	2515	002838	0 00	85	15159								
	19	8	QBS	0031	1774	34728	2515				15159								
	19		OBS	0047	1778	34778					15164								
			STD	0050	1787	3481	2518	002814			15167								
			STD	0075	1830	3497	2520	002805	0 02	12	15186 15186								
	19	8	OBS	0075	1830	3497					15188								
	19	8	OBS	0094	1828	34989	5 2521 2521	002796	8 02	8.2	15188								
			STO	0100	1825 1810	3498 3495	2523	002790			15188								
	1.0		STD OBS	0125	1800	3493		002//			15188								
	19	В	STD	0150	1737	3483	2531	002716	53 04	21	15169								
	19	8	085	T0189	1431	3436	3 2565				15075								
	- /		STO	0200	1368	3432	2575	00230		46	15056								
			STD	0250	1127	3418	2611	001970)5 06	53	14980								
	19	8	OBS	0282	1010	3411		00170	25 07	47	14942								
			STD	0300	0976	3409	2630	00178	95 01	41	14891								
	19	8	OBS	T0378	0833	3403		00155	/. B 0.5	15	14877								
			STD		0786	3403 3403	2656 2679	00132		159	14824								
			STO	0500 T0564	0610 0529	3403		00152	, 1		14802								
	19	, g	OBS STD		0510		2695	00118	11 11	84	14801								
			STD		0461	3419	2710	00104	29 12	95	14798								
	1 (8	OBS	0754	0438	3424	1 2716				14799								
	*		STD	0800	0421	3429		00093		394	14800								
			STO		0388	3437		00084	13 14	+83	14804								
	1	9.9	OBS	T0950	0373			00077			14806								
			STD		0359			00077		63	14809								
			STD		0333			00073		710	14822								
			STE		0311					778	1483								
			STO		0293			00065	-	842	14841								
			STO		0279			00062	7 1	J42	1485								
	1	9.8	085	T1468	0271	3455	4 2756				1400.								

			-		1								_	- T :						_	
RENCE	SHIP	LATITUGE	10	NGITUDE E	M.A.	UARE .	STAT	ION TIA	AE YEAR		ORIGIN			DE DE	AX. PTH OE	WAVE SERVATIONS	WE/		2		NODC
10. NO.	COOE		10	NGITUDE 5	10			DAY HR		CRUI		TATION		*****	DF DIR.	HGT PER S	COL				UMBER
	Div				1								1.								
1249	PW	3004 1	A T3	1957 W	12				89 196	8 N.I					16 08		2 X 2	2 2 7	′	1	0018
						WA	F			RO-	AIR TE/		VIŞ, ,		SPECIAL						
						COLOR	TRANS,	OIR.	OB III.	TER (bs)	ORY BULB	WET C		PTHS OBS	ERVATIONS						
								0.8	TORGE	54	183	156	7	14		1					
1					_		-	00	317 2	74	105		-	14			1		T	T	
	MESSENGR TIME		CARO	DEPTH (m)		ī °C	s	٠/	SIGMA-T	SPEC	FIC VOLU	ME E A	M.	SOUND	. 02 ml/	1 PO4-P	TOTAL-				рН
	HR 1/10	7 NO.	TYPE							ANG	MALY-XI	' x 1	03	VELOCIT		µg - at/l	µg − at/	1 pg = at/1	yg - 61/1	ug - a1/1	
										I											
			STD	0000	'	1768	34	69	2513	00	2844	8 00	00 ′	1515	2 '	1	'	'	1	,	
	189	۱ ج	DBS	0000		1768	34	685	2513					1515	2						
	189	9	OBS	0009		1766	34	686	2513					1515	3						
			STU	0010		1766	34	69	2513	0.0	2842	1 00	28	1515	3						
			STD	0020		1762	34	68	2514	0.0	2840	3 00	57	1515	3						
			STO	0030		1759	34	68	2514	0.0	2838	9 00	85	1515	4						
	189	9 (OBS	0033		1758		677	2515					1515							
			STD	0050		1768	34	72	2515	0.0	2836	6 01	42	1516	1						
	189	9 (DBS	0051		1769		721	2515					1516							
			STD	0075		1744	34		2516	00	2841	8 02	13	1515							
	189	3 (OBS	0079		1740		634	2516					1515							
			STU	0100		1773	34		2518	0.0	2827	0 02	84	1517							
	189	3 (DBS	0102		1776	_	773	2518					1517							
			STD	0125		1674	34		2531		2710			1514							
			STD	0150		1558	34		2546	0.0	2572	0 04	19	1511							
	189	9	OBS	0153		1544		456	2547					1510							
			STD	0200		1311	34		2572	0.0	2336	6 05	42	1503							
	189	7 1	DBS	T0204		1294		113	2574					1502							
			STO	0250		1154	34		2600		2070			1498							
			STD	0300		1018	34		2624	00	1846	7 07	50	1494							
	189)	OBS	0307		1001	_	106	2627	0.0			2.0	1494	-						
	100		STD	0400		0804	34		2652	00	1590	3 09	22	1488							
	189	4 (D8S STU	T0412 0500		0782	34	011	2655	0.0	1369	8 10	70	1487							
			STO	0600		0525	34		2675 2694)1192			1483							
	189	2	085	T0620		0506		090	2697	0 (11172	2 11	70	1480							
	10;	,	STO	0700		0467	34		2709	0.0	1050	2 13	10	1480							
			STU	0800		0424	34		2722		0934			1480							
	189	2	OBS	0827		0414		311	2725	U	10934	1 14	09	1480							
	103	7	STU	0900		0392	34		2731	0.0	0853	3 14	00	1480							
			STO	1000		0364	34		2738		0784			1480							
	189	9	DBS	1032		0355		441	2741	00	, , , , , 4	_ 17	00	1481							
			STO	1100		0338	34		2744	0.0	0734	2 16	56	1481							
														1482							
			STD	1200		0315	34	48	2748	0.0	0696	8 17									
						0315	34							1483							
			STD STD	1200				51	2752	0.0	0661 06629	2 17	96	1483	2						
			STD	1200 1300		0294	34	51 53		00	0661	2 17 4 18	96 60		2						

FEREN	SHIP			# E	MARSDEN	STATION TIN	ME YEAR		ATOR'S	DEPTH DE	TH OR	WAVE	W EA-	CLOUD		51	ATION	
	D. CODE	LATITU		NGITUDE TO		MO DAY HE		CF013C	TATION NUMBER	POTTO ME) F	HGT PER S	CODS		-		UMBER	
-+-			1/10	1/10									1					
3 1 1 2	49 PW	3007	N 13	1957 W	122 09		90 196				6 09	1 1	2 X1	6 3	1	- 1	0019	
					WAT			RD- AIR TE	ZIV VIS.		SPECIAL							
					COLOR	TRANS DIR.	O# 1	TER DRY	SULS COD	DEPTHS DES	ERVATION S							
					0000	07	FORCE	54 178	156 7	14								
						07	313 2	54 176	1		1		T					П
	MESSENGI		CARD	DEPTH (m)	т *С	s */	SIGMA-T	SPECIFIC VOLU		DNDOS	02 ml/	PO4-P	TOTAL-P		NO3-N	51 04-51	рН	S
	HR 1/10		TYPE	DECT// U		- "	370-1174-11	X-YJAMOPA	x 10 ³	, AEFOCIL		pg - 01/1	μg * α1/1	µg - at/l	yg = at/1	μg - 01/l		C
														}				
		1	STD	0000	1781	3474	2514	002833	15 0000	1515		1	1	,				
	19	0	OBS	0000	1781	34742	2514	00200		1515								
	19		055	0009	1779	34740	2514			1515								
		_	STD	0010	1780	3474	2514	002832	6 0028	1515	3							
			STD	0020	1785	3477	2515	002826										
			STD	0030	1790	3480	2516	002821	7 0085	1516	5							
	19	0	085	0033	1792	34811	2517			1516	5							
			STD	0050	1820	3493	2519	002804	9 014]	1517	В							
	19	0	OBS	0051	1821	34938	2519			1517	9							
			STD	0075	1817	3493	2520	002804	6 0211	1518	1							
	19	0	OBS	0080	1816	34931	2520			1518	2							
			STD	0100	1815	3493	2520	002809	0281	1518	5							
	19	0	035	0103	1812	34930	2521			1518	4							
			STD	0125	1751	3485	2530	002726										
			STD	0150	1645	3469	2542	002609	041									
	19	0	OBS	0156	1614	34644	2546			1513								
			STD	0200	1295	3410	2573	002321	77 054									
	10	0	OBS	T0208	1249	34036	2577			1501								
			STO	0250	1145	3407	2599	002081										
			STD	0300	1028	3410	2622	001869	94 0750									
	19	0	085	0314	0997	34109	2628	00160		1494								
		_	STD	0400	0816	3402	2650	00160	32 0924									
	19	0	085	T0420	0778	34010	2655	2012/	39 107	1487 3 1483								
			STD	0500	0644	3403	2675	001368										
	1.0		STD	0600	0519	3496	2693	001190	32 120.	1479								
	19	U	085	0629	0491	34070	2697	00106	52 131									
			STD	0700	0461	3416	2708											
			STD	0800 0838	0423	3427 34308	2720 2725	00094	70 141	1480								
	19	1)	OBS	0900	0393	3435	2730	00086	19 150									
			STD			3442	2738	00078										
	19		STD 085	1000 1046	0366	34446	2741	000701	30 120	1481								
	17	C	STD	1100	0342	3446	2744	00073	81 166									
			STD	1200	0320	3448	2747	00070										
			STD	1300	0301	3450	2751	000b7										
			STD	1400	0283	3453	2754	00063										
			STD	1500	0268	3455	2758	00061										
	19	10	OBS	T1577	0258	34565	2760	0000		1486								
	2.7	-	000	1 % '														

REFERENCE	T				« MAR	SDEN	STATION TIA	A E		ORIGI	NATOR	1*5	DEPTH	MAX, DEPTH		WAVE	WEA-	CLOUD			ODC	
CTRY ID.	SHIP	LATITU	OE LDI	AGITUDE		ARE	IGMTI		EAR	CRUISE	STATE		TD	OF		ERVATIONS	THER	CODES		51 N	UMBER	
CODE ND.	CDDE		1/10	11/10	10°	11"	MD DAY HR	,1/10		ND,	NUM	BER	MOTTOM	S'MPL'S	DIR.	HGT PER SE	A CODE	TYPE AM			CHURCH	
31124	9 PW	3007	N 13	955 W	122	09	03 30 0	70 1	968	N15 0	20		4663	16	07		2 X 1	6 3			0020	
1 21/124	7 ' "	, ,	"		,	WAT	ER W	IND I		AIR T	EMP. "		NO.									
						COLOR	TRANS. DIP	SPEED	BARO		W	ET COD	D85.		CIAL 'ATIONS							
						CDDE	fm1 DIR,	FORCE	imbsl		BU	1.8	DEPTHS									
							08	515	240	0 161	1	44 7	14									
											 	< A D	'			1				0.00		5
	MESSENGR TIME C	CAST	CARD	DEPTH In	13 1	r °c	5 %.	SIGMA	Y = A	SPECIFIC VOL	UME X197	₹ △ D DYN. M	. SDL	DCITY	02 ml/l	PD4-P pg = 01/L	TOTAL-P	NO2-N ug - al/i	ND3-N ND3-N	\$1 D4-\$1 V9 - 01/1	þН	C
	HR 1/10	ND.	TYPE				<u> </u>					X 10 ³				74			Pg			+
																			i			11
	1	1	STD	0000) .	1771	3475	251	7	00280	81	0000		153								
	0.70)	085	0000) :	1771	34745	251	7					153								
	070)	OBS	0009)	1764	34743	251	8					153								
			STD	0010)	1764	3474	251	8	00279	74	0028		153								
			STD	0020)	1760	3474	251	9	00279		0056		153								
			STD	0030		1753	3473	252		00278	87	0084		153								
	0.70)	085	0034	4	1750	34725	252						153								
			STD	0050		1732	3464	251	. 8	00280	98	0140		149								
	0.70)	085	0050		1728	34638	251						148								
			STD	0075		1776	3479	251		00281	15	0210		168								
	370)	OBS	0082	2	1784	34821	251						172								
			STD	0100		1786	3484	252		00280	77	0280		175								
	0.70)	OBS	0106	5	1786	34843	252						176								
			STO	0125	5	1694	3469	253		00271		0349		150								
			STD	0150)	1565	3449	254		00257	98	0416		113								
	0.73	0	OBS	0160		1512	34416	255						097								
			STD	0200		1272	3412	257		00226	91	053.		021								
	070	0	085	T021		1209	34050	258						001								
			STD	025		1119	3408	260		00202		0644		976								
			STD	030		1009	3410	262		00183	67	074		1945								
	0.70	C	085	032		0969	34102	263			0.5	00.2		933								
			STD	040		0831	3403	264		00162	35	091		894								
	071	0	085	042		0787	34016	265		00100	20	101		881								
			STD	050		0652	3403	267		00138		106		841								
			STD	060		0514	3407	269		00118	61	119		802								
	0.71	0	085	064		0472	34100	270		00101		120		+792								
			STD	070		0451	3417	270		00104		130		794								
			STU	080		0418	3427	272		00094	19	140		798								
	0.7	0	OBS	085		0403	34314	272			0.4	260		+801								
			STD	090		0390	3435	273		00085		149		+804								
			STD	100		0366	3442	273		00078	66	157		+812								
	0.7	0	085	107	-	0349	34462	274				1		817								
			STO	110		0342	3448	274		00072		165		819								
			STD	120		0321	3452	275		00067		172		827								
			STD	130		0300	3455	275		00063		178		4835								
			STO	140		0281	3458	27!		00059		184		4845								
		_	STD	150		0263	3458	276		00058	117	190		4854								
	07	0	OBS	T162	U	0244	34580	276	62				1.	4866								





532-AA

Woods Hole Oceanographic Institution
ATLAS - GAZETTEER COLLECTION



